



88045141



U.S. Department of the Interior  
Bureau of Land Management



Coos Bay District Office  
1300 Airport Lane  
North Bend, Oregon 97459

May 1995

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# **Coos Bay District Record of Decision and Resource Management Plan**





As the Nation's principal conservation agency, the Department of the Interior has responsibility for most of our nationally owned public lands and natural resources. This includes fostering the wisest use of our land and water resources, protecting our fish and wildlife, preserving the environmental and cultural values of our national parks and historical places, and providing for the enjoyment of life through outdoor recreation. The Department assesses our energy and mineral resources and works to assure that their development is in the best interest of all people. The Department also has a major responsibility for American Indian reservation communities and for people who live in Island Territories under U.S. administration.

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# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
COOS BAY DISTRICT OFFICE  
1300 AIRPORT LANE  
NORTH BEND, OREGON 97459-2000

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In Reply Refer to:  
1617

May 15, 1995

Dear Reader:

This consolidated document includes both the Record of Decision (ROD) and the Coos Bay District Resource Management Plan (RMP), which was approved by the Oregon/Washington State Director, on May 8, 1995. The ROD approves the Bureau of Land Management's (BLM) decisions for managing approximately 329,700 acres in portions of Coos, Curry, Douglas, and Lane counties, in southwestern Oregon.

The ROD was prepared in conformance with Title 40, Code of Federal Regulations, part 1505.2, which requires a concise document linking the manager's decision to the analysis presented in the Coos Bay District Final Environmental Impact Statement (FEIS), dated November 1994. The ROD shows how environmental impacts and other factors were considered in the decision-making process. The ROD documents approval and adoption of the proposed Resource Management Plan, as described in the Coos Bay District Proposed Resource Management Plan/ Final Environmental Impact Statement (PRMP/FEIS). Minor differences from the FEIS, Volume I, Chapter 2 of the PRMP/FEIS, or points of clarification in land use allocations or management direction have been incorporated in response to public comment on the PRMP/FEIS, as well as ongoing staff review.

It should be noted that the Director of the Bureau of Land Management determined that there were five valid protests on the Coos Bay District PRMP/FEIS. After careful consideration of all points raised in those protests, the Director concluded that the planning team and decision-makers followed the applicable planning procedures, laws, regulations, policies and resource considerations in developing the Proposed Coos Bay District Resource Management Plan. In addition, the Governor of Oregon was provided a formal opportunity to review the proposed plan for conformance with officially approved or adopted natural resource-related plans, programs or policies of the state or local governments. There were no objections from the Governor.

A copy of this document has been sent to all those individuals and groups who were on the mailing list for the PRMP/FEIS. The full supporting record for the approved Coos Bay District RMP is also available for inspection in the District Office, at the address shown above. Copies of draft and final EISs are also available for inspection in the public room on the seventh floor of the BLM Oregon/Washington State Office, 1515 SW Fifth Street Portland, Oregon; and the public libraries in Brookings, Gold Beach, Bandon, Myrtle Point, Coquille, Coos Bay, North Bend, Reedsport, and Powers during normal office hours. Due to the cost of publication and the expected long-term use of these documents, we urge you to retain your personal copies of each of these documents for future reference.

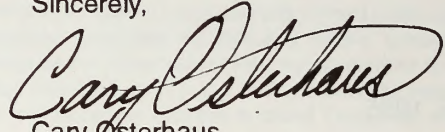
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Although this document contains a map packet with critical information on major land use allocations and management prescriptions, some of the maps will require periodic updating as we implement the approved plans, collect and analyze more information and practice adaptive management. In addition, a district map will be developed to provide more detailed information for off-highway-vehicle management designations and made available to the public.

We are pleased to provide this copy for your reference and we extend our appreciation for your interest, cooperation and assistance during this planning process. We encourage you to stay informed and involved as we implement, monitor and evaluate the plan.

Sincerely,



Cary Osterhaus  
District Manager

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U.S. Department of the Interior  
Bureau of Land Management

**Coos Bay District**  
**Record of Decision**  
and  
**Resource Management Plan**

Prepared by

**Coos Bay District Office**

**May 1995**





## Acronyms/Abbreviations

|                |                                               |
|----------------|-----------------------------------------------|
| <b>ACEC</b>    | - Area of Critical Environmental Concern      |
| <b>APD</b>     | - Application for Permit to Drill             |
| <b>ASQ</b>     | - Allowable Sale Quantity                     |
| <b>BLM</b>     | - Bureau of Land Management                   |
| <b>BMP</b>     | - Best Management Practice                    |
| <b>C/DB(s)</b> | - Connectivity/Diversity Block(s)             |
| <b>CBWR</b>    | - Coos Bay Wagon Road                         |
| <b>CEQ</b>     | - Council of Environmental Quality            |
| <b>CFL</b>     | - Commercial Forest Lands                     |
| <b>CFR</b>     | - Code of Federal Regulations                 |
| <b>COE</b>     | - Corps of Engineers                          |
| <b>CSU</b>     | - Controlled Surface Use                      |
| <b>CT</b>      | - Commercial thinning                         |
| <b>DBH</b>     | - Diameter at breast height                   |
| <b>DEIS</b>    | - Draft Environmental Impact Statement        |
| <b>DEQ</b>     | - Department of Environmental Quality         |
| <b>EA</b>      | - Environmental Assessment                    |
| <b>EEA</b>     | - Environmental Education Area                |
| <b>EIS</b>     | - Environmental Impact Statement              |
| <b>EO</b>      | - Executive Order                             |
| <b>EPA</b>     | - Environmental Protection Agency             |
| <b>ESA</b>     | - Endangered Species Act                      |
| <b>FEIS</b>    | - Final Environmental Impact Statement        |
| <b>FEMAT</b>   | - Forest Ecosystem Management Assessment Team |
| <b>FGR</b>     | - Fragile Gradient Restricted                 |
| <b>FLPMA</b>   | - Federal Land Policy and Management Act      |
| <b>FY</b>      | - Fiscal Year                                 |



## Acronyms/Abbreviations

|        |   |                                                        |        |
|--------|---|--------------------------------------------------------|--------|
| GIS    | - | Geographic Information System                          |        |
| GFMA   | - | General Forest Management Area                         | ACEC   |
| IDT    | - | Interdisciplinary team                                 | APQ    |
| ISA    | - | Instant Study Area                                     | ASQ    |
| LSR(s) | - | Late Successional Reserve(s)                           | BLM    |
| MBF    | - | Thousand Board Feet                                    | BMP    |
| MMBF   | - | Million board feet                                     | CDB(s) |
| MMCF   | - | Million cubic feet                                     | COWT   |
| MTP    | - | Master Title Plat                                      | CEQ    |
| NA     | - | No Action                                              | CFL    |
| NEPA   | - | National Environmental Policy Act                      | CFR    |
| NMFS   | - | National Marine Fisheries Service                      | COE    |
| NSO    | - | No Surface Occupancy (as used in the Minerals section) | CSU    |
| O&C    | - | Oregon and California Revested Lands                   | CT     |
| ODFW   | - | Oregon Department of Fish and Wildlife                 | DBH    |
| OHV    | - | Off-Highway Vehicle                                    | DEIS   |
| PCT    | - | Precommercial thinning                                 | DEQ    |
| PD     | - | Public domain                                          | EA     |
| PL     | - | Public Law                                             | EEA    |
| PLO    | - | Public Land Order                                      | EIS    |
| PRMP   | - | Proposed Resource Management Plan                      | EO     |
| PSC    | - | Power Site Reserve                                     | EPA    |
| NOS    | - | Notice of Staking                                      | ESA    |
| RIA    | - | Rural interface area                                   | FIS    |
| RMP    | - | Resource Management Plan                               | FEMAT  |
| RNA    | - | Research Natural Area                                  | FOR    |
| ROD    | - | Record of Decision                                     | FLPMA  |
| RR(s)  | - | Riparian Reserve(s)                                    | FY     |

|                 |                                               |
|-----------------|-----------------------------------------------|
| <b>R&amp;PP</b> | - Recreation and Public Purposes Act          |
| <b>SCFL</b>     | - Suitable Commercial Forest Land             |
| <b>SEIS</b>     | - Supplemental Environmental Impact Statement |
| <b>SFP(s)</b>   | - Special Forest Product(s)                   |
| <b>SO</b>       | - Secretarial Order                           |
| <b>SRMA</b>     | - Special Recreation Management Area          |
| <b>T&amp;E</b>  | - Threatened and Endangered (species)         |
| <b>TPCC</b>     | - Timber Production Capability Classification |
| <b>USCG</b>     | - United States Coast Guard                   |
| <b>USFS</b>     | - U.S. Forest Service                         |
| <b>USFWS</b>    | - U.S. Fish and Wildlife Service              |
| <b>USDI</b>     | - United States Department of the Interior    |
| <b>VRM</b>      | - Visual Resource Management                  |
| <b>WPD</b>      | - Water Power Designation                     |
| <b>WSA</b>      | - Wilderness Study Area                       |











# Record of Decision for the Coos Bay District Resource Management Plan

Prepared by Bureau of Land Management, Coos Bay District, North Bend, Oregon.

## Introduction

This Record of Decision adopts and approves for immediate implementation the Coos Bay District Resource Management Plan, based on the combination of the August 1992 Draft Resource Management Plan/Environmental Impact Statement (DRMP/EIS) and the September 1994 Proposed Resource Management Plan/Final Environmental Impact Statement (PRMP/FEIS). The Record of Decision (ROD) is also supported by, and consistent with, the February 1994 *Final Supplemental Environmental Impact Statement on Management of Habitat of Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (SEIS) and its associated April 1994 interagency *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*. The Resource Management Plan (RMP) addresses resource management on approximately 329,700 acres of BLM-administered land and 12,150 acres of reserved mineral estate administered by Bureau of Land Management in the Coos Bay District, which are primarily in Coos, Curry, Douglas and Lane counties, Oregon.

The approved Resource Management Plan responds to the need for a healthy forest ecosystem with habitat that will contribute toward and support populations of native species, particularly those associated with late-successional and old-growth forests. It also responds to the need for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies, and contribute valuable resources to the national economy on a predictable and long-term basis. As guided by the April 1994 interagency *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, BLM-managed lands are primarily allocated to Riparian Reserves, Late-Successional Reserves, Connectivity/Diversity Blocks and General Forest Management Areas. An Aquatic Conservation Strategy will be applied to all lands and waters under BLM administration. Major land and resource allocations of the approved Resource Management Plan are displayed in Table 1, which is at the end of this ROD.

## Alternatives Considered and Rationale for Decision

There were seven alternatives analyzed in the FEIS for management of the BLM-administered lands and resources in the Coos Bay District, and nine other alternatives were analyzed in the final SEIS. The following is a brief description of each alternative analyzed in the FEIS.

**The Proposed Resource Management Plan** - This alternative would emphasize ecosystem management. Resources would be managed with an emphasis on retention of late-successional forests, restoration and/or maintenance of watershed conditions, protection of special status and other species requiring special attention, and a variety of other land uses. It would also respond to public comments, incorporate land use allocations and management direction from the interagency Record of Decision noted above, and allow the BLM to manage the natural resources under its jurisdiction to maintain healthy, diverse and productive ecosystems.

**No Action** - This alternative would entail no change from the management direction established in BLM's current Management Framework Plans (except where Congress has since enacted legislation prescribing different management direction for specific geographic areas or transferring specific lands to the administration or ownership of other parties).

**Alternative A** - This alternative would emphasize a high production of timber and other economically important values on all lands to contribute to community stability.



## **Record of Decision**

**Alternative B** - This alternative would emphasize timber production to contribute to community stability, consistent with the variety of other land uses, on O&C and Coos Bay Wagon Road lands. Public domain lands having greater importance for nontimber values and uses other than timber production, however, would be managed primarily for the maintenance of those nontimber values and uses.

**Alternative C** - This alternative would provide timber production to contribute to community stability consistent with the variety of other land uses. It would emphasize retention and improvement of natural biological diversity.

**Alternative D** - This alternative would emphasize management and enhancement of values such as diversity of wildlife habitat, dispersed nonmotorized recreation opportunities, and scenic resources, consistent with a variety of other land uses including some timber production. Spotted owl habitat would be protected in accordance with the Interagency Scientific Committee Conservation Strategy for the Northern Spotted Owl.

**Alternative E** - This alternative would emphasize protection of older forests, and management and enhancement of values such as dispersed nonmotorized recreation opportunities and scenic resources. A sustained yield of timber would be produced consistent with the emphasis on these other values.

### **Rationale**

The proposed action responds to multiple needs, the two primary ones being the need for forest habitat and the need for forest products. As stated in the PRMP/FEIS, on page 1-4:

- The need for forest habitat is the need for a healthy forest ecosystem with habitat that will support populations of native species and includes protection for riparian areas and waters. This need was reflected by President Clinton at the April 2, 1993, Forest Conference in Portland, Oregon.
- The need for forest products from forest ecosystems is the need for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies, and contribute valuable resources to the national economy, on a predictable and long-term basis. This need also was reflected by President Clinton at the Forest Conference.

The Congressionally directed purposes for managing the BLM-administered lands include both conserving the ecosystems upon which species depend, and at the same time providing raw materials and other resources that are needed to sustain the health and economic well-being of the people of this country. To balance these sometimes conflicting purposes, we adopt the alternative that will both maintain the late-successional and old-growth forest ecosystem and provide a predictable and sustainable supply of timber, recreational opportunities, and other resources at the highest level possible. The Proposed Resource Management Plan Alternative (PRMP) best meets these criteria.

The PRMP, unlike all of the other action alternatives, applies the same criteria for management of habitat on both Forest Service and BLM lands. This was done in order to accomplish most efficiently the dual objectives discussed above — that is, achieving the biological results required by law, while minimizing adverse impact on timber harvests and jobs. The inefficiencies involved in applying different criteria on Forest Service and BLM land have been noted in previous analyses. For example, in the Report of the Scientific Analysis Team (“SAT Report”), the team found that BLM’s plans were relatively high-risk, when compared to the plans of the Forest Service, in terms of conserving the northern spotted owl. As a result, the SAT found that in order for the Forest Service to “make up for significantly increased risks,” it would have to dramatically increase the size of protected areas on Forest Service land (SAT Report, pages 12-13).

We have reviewed the alternatives discussed in the PRMP/FEIS and their predicted environmental, economic and social consequences, and the risks and safeguards inherent in them. The PRMP in the PRMP/FEIS is the best alternative for providing a sustainable level of human use of the forest resources while still meeting the need to maintain and restore the late-successional and old-growth forest ecosystem. We therefore select the PRMP as the management direction that best responds to the purpose and need for the proposed action as expressed in the PRMP/FEIS.



We base our conclusion on a number of factors. Although management under Alternatives A, B, or the No-Action Alternative would provide higher levels of timber supply than the PRMP, those alternatives would not provide adequate assurance that the processes and functions of late-successional and old-growth forest ecosystems would be maintained and restored, and would not provide adequate assurance that the riparian habitat essential for many aquatic and terrestrial species would be maintained and restored. All alternatives, except Alternative E and the PRMP, would have a negative long-term impact on the northern spotted owl. The PRMP would have a beneficial impact on more Special Status Animal Species than any other alternative. See PRMP/FEIS, pages 4-68 through 4-86. The PRMP “provides the greatest protection of aquatic habitat” by providing wider Riparian Reserves and more protective measures for perennial and intermittent streams than other alternatives. See PRMP/FEIS, page 4-60.

The No-Action Alternative is based on plans that existed prior to the listing of both the northern spotted owl and the marbled murrelet, and it makes no specific provision for the recovery of those species. In addition, it reflects a relatively low level of riparian habitat protection. In view of these factors, we think it is unlikely that Alternatives A and B and the No-Action Alternative would be deemed to satisfy the requirements of the Endangered Species Act.

The impacts to many species, and groups of species, of fish, wildlife and plants are complex and difficult to summarize in this Record of Decision. They are described in detail in the PRMP/FEIS. Based upon the PRMP/FEIS and all of the information in the record, we have determined that PRMP will continue to meet the needs of species influenced by federal land management activities. We find it meets the requirements of the Endangered Species Act for the conservation of listed species. It also meets the requirements of laws directing the management of these forests for sustainable multiple uses, including the Federal Land Policy and Management Act, and the Oregon and California Lands Act. Moreover, it meets the requirements of acts that protect elements of the environment, and requirements for coordinated planning and consultation.

The PRMP allows silvicultural activities, such as thinning young stands in Late-Successional Reserves, when those activities will enhance late-successional conditions. Compared to the other alternatives, the PRMP will in the future provide the best network of old-growth forests.

## The Environmentally Preferable Alternative

Environmental preferability is judged using the criteria suggested in the National Environmental Policy Act of 1969 (NEPA), which is guided by the Council on Environmental Quality (CEQ). The CEQ has stated that “The environmentally preferable alternative is the alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Generally, this means the alternative that causes the least damage to the biological and physical environment; it also means the alternative which best protects, preserves, and enhances historic, cultural, and natural resources.” (Council on Environmental Quality, “Forty Most Asked Questions Concerning CEQ’s National Environmental Policy Act Regulations (40 CFR 1500-1598), *Federal Register* Vol. 46, No. 55, 18026-18038, March 23, 1981: Question 6a.)

NEPA’s Section 101 establishes the following goals:

- Fulfills the responsibility of this generation as trustee of the environment for succeeding generations (NEPA §101(b)(1)).
- Assures for all Americans productive and aesthetically and culturally pleasing surroundings (NEPA §101(b)(2)).
- Attains the widest range of beneficial uses of the environment without degradation or other undesirable and unintended consequences (NEPA §101(b)(3)).
- Preserves important natural aspects of our national heritage and maintains an environment which supports diversity and variety of individual choice (NEPA §101(b)(4)).



- Achieves a balance between population and resource use, which permits high standards of living and a wide sharing of life's amenities (NEPA §101(b)(5)).
- Enhances the quality of renewable resources and approach the maximum attainable recycling of depletable resources (NEPA §101(b)(6)).

The PRMP would allow for the smallest amount of directly human-induced effects on the physical environment. It would provide approximately 136,800 acres to be managed for the retention and development of older forests (Late-Successional Reserves) and 6,600 acres to be managed for the maintenance of older forest characteristics (Connectivity/Diversity Blocks). Approximately 89,600 acres would be managed as Riparian Reserves. (See PRMP/FEIS, Figure S-2, page S-15.) The PRMP has more positive estimated effects on wildlife habitat than any other alternative. (See PRMP/FEIS, Table 4-8, page 4-37.) In the long-term, the conditions of riparian zones on BLM-administered lands are expected to improve under the PRMP more than any other alternative. (See PRMP/FEIS, page 4-47.) Based on the probable sale quantity estimates, BLM forests in the planning area would produce about 5.3 million cubic feet (i.e., 32 MMBF) of timber annually under the PRMP. (See PRMP/FEIS, Table S-1, page S-22.) Based on these factors, we conclude that the PRMP is the "environmentally preferable alternative."

## **Implementation**

Decisions in this plan will be implemented over a period of years. The rate of implementation is dependent on the BLM's budgeting process. General priorities for overall management will be developed through long-term budgeting processes and in consultation with other agencies, tribes and government units. Specific priorities for geographic subunits or for individual programs or projects will be established, in large part, after local watershed analysis, Late-Successional Reserve assessments, and further environmental analysis are completed, as appropriate. Those priorities will be reviewed annually to help develop the work plan commitments for the coming years. The procedures to implement, called Management Actions/Direction, are shown in the approved plan by major land use allocations and by resource program. Although the RMP implementing actions are described by individual resources, most activities will be consolidated and considered in interdisciplinary, multi-resource activity plans and based on watershed analyses.

## **Valid Existing Rights**

This plan will not repeal valid existing rights on public lands. Valid existing rights are those rights or claims to rights that take precedence over the actions contained in this plan. Valid existing rights may be held by other federal, state or local government agencies, or by private individuals or companies. Valid existing rights may pertain to mining claims, mineral or energy leases, rights-of-way, reciprocal right-of-way agreements, leases and permits, and water rights.

## **Administrative Actions**

Various types of administrative actions will require special attention beyond the scope of this plan. Administrative actions are the day-to-day transactions required to serve the public and to provide optimum use of the resources. These actions are in conformance with the plan. They include, but are not limited to: permits or sales for traditional or special forest products; competitive and commercial recreation activities; lands and realty actions, including issuance of grants, leases, and permits, and resolution of trespass; facility maintenance; law enforcement and hazardous material removal or mitigation; enforcement and monitoring of permit stipulations; cadastral surveys to determine legal land or mineral estate ownership; and engineering support to assist in mapping, designing and implementing projects. These and other administrative actions will be conducted at the resource area, district or state level, sometimes in partnership with other landowners or agencies or entities. The degree to which these actions are carried out will depend upon BLM policies, available personnel, funding levels, and further environmental analysis and decision making, as appropriate.



# Mitigation and Monitoring

All protective measures and other management direction identified in the plan will be taken to avoid or mitigate adverse impacts. These measures will be taken throughout implementation. All practical means to avoid or reduce environmental harm will be adopted, monitored and evaluated, as appropriate.

Monitoring will be conducted as identified in the approved plan. Monitoring and evaluations will be utilized to ensure that decisions and priorities conveyed by the plan are being implemented, that progress toward identified resource objectives is occurring, that mitigating measures and other management direction are effective in avoiding or reducing adverse environmental impacts, and that the plan is maintained and consistent with the ongoing development of BLM State Office, regional, and national guidance.

## Public Involvement

A notice announcing the formal start of the Coos Bay District RMP planning process was published in the *Federal Register* (Vol.51, No.167) on August 28, 1986, in the local news media, and a mailer to all known interested parties. A series of planning brochures and documents were distributed over the entire planning period to provide public input and feedback opportunities in the development of planning issues, goals, objectives and data needs for the Coos Bay District planning effort.

In January, 1991, approximately 350 copies of the Coos Bay District *Summary of the Analysis of the Management Situation* and preliminary alternatives were mailed to interested agencies, organizations and individuals. This document described a variety of alternatives (most of which had similar objectives) to comparable alternatives in the other five ongoing BLM western Oregon RMP/EISs.

On August 20, 1992, a Notice of Availability of the *Draft Coos Bay District Proposed Resource Management Plan/Environmental Impact Statement* was published in the *Federal Register* (Vol. 57, No. 162) by the BLM, in addition to an August 21, 1992 (Vol. 57, No. 163) notice by the Environmental Protection Agency. Newspaper and other media were also notified of the document availability; the length of the comment period; and the date, time and locations of public meetings. The DRMP/DEIS or the Summary was sent to approximately 1,800 individuals, organizations and agencies. A total of 25 persons attended the meetings. A total of 196 letters and 799 form letters or resolutions signed by 1,115 people were received by the end of the extended comment period.

A summary of public involvement associated with the July 1993 Draft and February 1994 *Final Supplemental Environmental Impact Statement on Management of Habitat of Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* is included on pages 58-73 of the April 1994 interagency *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* and is hereby incorporated by reference.

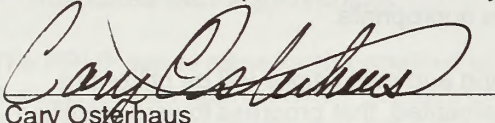
On November 22, 1994, a Notice of Availability of the *Final Coos Bay District Proposed Resource Management Plan/Environmental Impact Statement* was published in the *Federal Register* (Vol. 59, No. 224) by the BLM. In addition, a November 25, 1994 notice by the Environmental Protection Agency (Vol. 59, No.226) initiated the official protest and public comment period. Newspaper and other media were also notified of the document availability; the length of the protest period; and the dates, time and locations of public meetings. The PRMP/FEIS or the summary was sent to approximately 570 individuals, organizations and agencies. A total of two persons attended the meetings. Four letters were received by the District Manager. There were no objections or recommendations by the Governor on behalf of any State or local government entities. There are no known inconsistencies with officially approved or adopted natural resource related plans, policies or programs of applicable State or local governments or Indian tribes.

The official period to protest the proposed plan closed on December 27, 1994. Five valid protests on the proposed Coos Bay District RMP were received, reviewed, and resolved by the Director. As a result of the protests and four comment letters, a number of non-substantive changes have been made in the text of the approved plan to reflect typographical corrections, improve clarity, or demonstrate consistency with various regulatory procedures or policies.



## Recommendation

With full knowledge of the commitment to resource and ecosystem management represented by the plan, I recommend the adoption of the Coos Bay District Resource Management Plan.



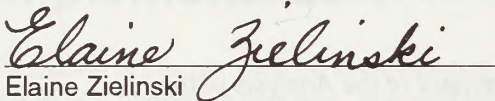
Cary Osterhaus  
District Manager, Coos Bay District

5-8-95  
Date

## State Director Approval

I approve the Coos Bay District Resource Management Plan as recommended and hereby declare that, effective October 1, 1994, the annual productive capacity (allowable harvest level) of the South Coast - Curry Master Units is 5.3 million cubic feet.

This document meets the requirements for a Record of Decision as provided in 40 CFR 1505.2.



Elaine Zielinski  
State Director, Oregon/Washington  
Bureau of Land Management

5/8/95  
Date

**Table 1. Summary of Land Use Allocations and Management Actions/Direction**

(Note: detailed management direction is described in the Resource Management Plan)

**Major Land Allocations****Acres <sup>1</sup>**

|                                        |                |
|----------------------------------------|----------------|
| Congressional Reserves                 | 600            |
| Late-Successional Reserves             | 136,800        |
| District Defined Reserves <sup>2</sup> | 20,400         |
| Riparian Reserves                      | 89,600         |
| General Forest Management Area         | 55,300         |
| Connectivity/Diversity Blocks          | <u>6,600</u>   |
| <b>Total</b>                           | <b>309,300</b> |

<sup>1</sup> Allocations do not have any overlapping designations.<sup>2</sup> District Defined Reserves include areas designated for Special Management Areas, Existing or Potential Recreation Sites/Areas, TPCC Unavailable Lands, and Threatened and Endangered Species Habitat.**Water Quality and Riparian Zones****Acres**

|                                |         |
|--------------------------------|---------|
| Riparian Reserves <sup>3</sup> | 203,200 |
|--------------------------------|---------|

<sup>3</sup> Riparian Reserves occur within all other land use allocations.**Old-Growth and Mature Forest Habitat****Acres**

Management Decision:

Manage 43 percent of the land as Late-Successional Reserves and 2 percent as Connectivity/Diversity Blocks.

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| Areas managed for retention and development of older forest stands <sup>4</sup> | 247,400 |
| Areas managed for maintenance of older forest characteristics <sup>5</sup>      | 6,600   |
| Acres of older forest retained at the end of the decade <sup>6</sup>            | 114,000 |

<sup>4</sup> Includes Late-Successional Reserves, Riparian Reserves, and other lands not available for timber harvest.<sup>5</sup> Connectivity/Diversity Blocks.<sup>6</sup> Forest stands 100 years and older.**Timber****Acres****Forest Management Allocations (acres of commercial forest land)**

|                                                      |         |
|------------------------------------------------------|---------|
| General Forest Management Area, intensive management | 55,300  |
| Connectivity/Diversity Blocks, restricted management | 6,600   |
| Enhancement of Other Uses or Not Available           | 247,400 |



**Table 1. Summary of Land Use Allocations and Management Actions/Direction (continued)**

| <b>Timber (continued)</b>                                                                                                                               |  | <b>Acres</b> |
|---------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------|
| <b>Practices (assumed average annual acres for first decade)</b>                                                                                        |  |              |
| Regeneration Harvest                                                                                                                                    |  | 580          |
| Commercial thinning/density management harvest                                                                                                          |  | 610          |
| Site Preparation                                                                                                                                        |  |              |
| Prescribed Fire                                                                                                                                         |  | 760          |
| Other                                                                                                                                                   |  | 100          |
| Stand Maintenance/Protection                                                                                                                            |  | 6,400        |
| Release/Precommercial thinning                                                                                                                          |  | 3,480        |
| Brushfield/Hardwood Conversion                                                                                                                          |  | 120          |
| Planting                                                                                                                                                |  |              |
| Regular Stock                                                                                                                                           |  | 220          |
| Genetically-selected Stock                                                                                                                              |  | 540          |
| Fertilization                                                                                                                                           |  | 1,200        |
| Pruning                                                                                                                                                 |  | 870          |
| <hr/>                                                                                                                                                   |  |              |
| New Road construction: (18.6 miles)                                                                                                                     |  |              |
| New Road construction: (acres)                                                                                                                          |  | 100          |
| Allowable Sale Quantity <sup>7</sup> (MMCF)                                                                                                             |  | 5.3          |
| Allowable Sale Quantity <sup>7</sup> (MMBF)                                                                                                             |  | 32           |
| Miscellaneous volume <sup>8</sup> (MMCF)                                                                                                                |  | 0.8          |
| Miscellaneous volume <sup>8</sup> (MMBF)                                                                                                                |  | 5            |
| <hr/>                                                                                                                                                   |  |              |
| <b>Special Status Species Including Threatened and Endangered Species Habitat</b>                                                                       |  | <b>Acres</b> |
| Management Decision:                                                                                                                                    |  |              |
| Manage habitats of Federal listed, Federal Candidate, State-listed, Bureau sensitive, and SEIS Special Attention Species on all BLM-administered lands. |  |              |
| Acres managed so as not to contribute to need to list.                                                                                                  |  | 329,600      |

<sup>7</sup> Based on coniferous volume only.<sup>8</sup> Volume harvested from Late-Successional Reservess, Riparian Reserves, District Defined Reserves, and hardwoods.

**Table 1. Summary of Land Use Allocations and Management Actions/Direction  
(continued)****Wildlife (including Fisheries) Habitat**

|                                     |         |
|-------------------------------------|---------|
| Special habitat buffer width (feet) | 100-300 |
| Fish habitat improvement (miles)    | 40      |
| Forage seeding (acres/year)         | 290     |

**Special Areas**

|                                               |       |
|-----------------------------------------------|-------|
| Retain Existing RNA/ACECs                     |       |
| Number                                        | 1     |
| Acres                                         | 570   |
| Retain Other Existing ACECs                   |       |
| Number                                        | 1     |
| Acres                                         | 880   |
| Designate New RNA/ACECs                       |       |
| Number                                        | 0     |
| Acres                                         | 0     |
| Designate Other new ACECs                     |       |
| Number                                        | 9     |
| Acres                                         | 7,950 |
| Retain Existing Environmental Education Areas |       |
| Number                                        | 1     |
| Acres                                         | 70    |
| Total RNA/ACECs                               |       |
| Number                                        | 1     |
| Acres                                         | 570   |
| Total Other RNA/ACECs                         |       |
| Number                                        | 10    |
| Acres                                         | 8,830 |

**Recreation Resource**

|                                       |       |
|---------------------------------------|-------|
| Recreation Sites                      |       |
| Existing                              |       |
| Number of sites                       | 12    |
| Acres                                 | 1,655 |
| New                                   |       |
| Number of sites                       | 12    |
| Acres                                 | 410   |
| County Parks on BLM-administered land |       |
| Recreation Sites                      |       |
| Number of sites                       | 6     |
| Acres                                 | 650   |



**Table 1. Summary of Land Use Allocations and Management Actions/Direction (continued)**

## Recreation (continued)

### Trails Maintained

#### Existing

Number of trails

4

Miles

4

#### New

Number of trails

8

Miles

38-52

### Special Recreation Management Areas

#### Existing

Number of sites

4

Acres

3,700

#### New

Number of sites

3

Acres

25,700

### Back Country Byways

Number of roads

5

Miles of road

155

Acres open to OHV use

80

Acres OHV limited to Designated Roads and Trails

326,600

Acres closed to OHV use

3,000

Miles of Road Open

830-1,360

Miles of Road Closed

205-735

## Wild and Scenic Rivers

River segments found suitable for designation as:

#### Recreational

Number of segments

0

Miles

0

#### Scenic

Number of segments

0

Miles

0

#### Wild

Number of segments

0

Miles

0

**Table 1. Summary of Land Use Allocations and Management Actions/Direction (continued)****Visual Resources**

## Management Decision:

Manage Congressionally designated areas as VRM Class I. Manage available forest land as inventoried within 0.25 mile of recreation sites, and state and federal highways. Manage other available forest land as VRM Class IV. Manage all other land as inventoried.

|                         |         |
|-------------------------|---------|
| Manage as VRM Class I   | 600     |
| Manage as VRM Class II  | 6,600   |
| Manage as VRM Class III | 14,700  |
| Manage as VRM Class IV  | 307,700 |

**Land Tenure****Acres**

## Management Decision:

Make exchanges within zones 2 and 3 that would enhance management opportunities to benefit one or more resource values. Sell PD lands and O&C or CBWR lands in zone 3 that meet criteria of FLPMA Section 203(a). Consider R&PP leases to provide public facilities or services.

|                                                    |         |
|----------------------------------------------------|---------|
| Identified for retention (Zone 1)                  | 4,600   |
| Potentially eligible for exchange only (Zone 2)    | 324,000 |
| Potentially eligible for sale or exchange (Zone 3) | 1,100   |

**Rights-of-Way****Acres**

|                              |         |
|------------------------------|---------|
| Right-of-Way Avoidance Areas | 146,700 |
| Right-of-Way Exclusion Areas | 600     |

**Energy and Minerals Management****Acres**

|                                                  |         |
|--------------------------------------------------|---------|
| Available for oil and gas and geothermal leasing | 328,000 |
| Closed to oil and gas and geothermal leasing     | 1,600   |
| Open to mining claim location and operation      | 317,100 |
| Closed to mining location                        | 12,500  |
| Open to saleable mineral development             | 311,900 |
| Closed to saleable mineral development           | 15,300  |



**Table 1. Summary of Land Use Allocations and Management Actions/Direction  
(continued)**

| <b>Rural Interface Management</b>                                               | <b>Acres</b> |
|---------------------------------------------------------------------------------|--------------|
| Areas considered for alternative management practices                           | 2,100        |
| Areas where clearcutting, aerial herbicide, and prescribed burning are excluded | 0            |
| Areas managed for VRM Class II objectives                                       | 0            |
| Areas managed for VRM Class III objectives                                      | 2,100        |

Table 2. Summary of Environmental Consequences, Comparison of Alternatives

| Effects                                                                                                                        | Allocation/Management Actions by Alternative |                 |                 |       |       |      |      |      |
|--------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------|-----------------|-------|-------|------|------|------|
|                                                                                                                                | RMP <sup>1</sup>                             | PA <sup>2</sup> | NA <sup>3</sup> | A     | B     | C    | D    | E    |
| <b>Air Quality</b> (tons of fuel burned <sup>4</sup> annually in prescribed fires, 1,000 tons)<br>(1976-1979 Baseline 121,600) | 21.2                                         | 59.4            | 111.1           | 144.2 | 144.5 | 34.9 | 37.7 | 36.0 |
| <b>Water Quality</b> (10 years) <sup>5</sup>                                                                                   |                                              |                 |                 |       |       |      |      |      |
| No. of watersheds probably improving <sup>6</sup>                                                                              | 5                                            | 3               | n/a             | 1     | 2     | 3    | 5    | 4    |
| No. of watersheds probably declining                                                                                           | 0                                            | 2               | n/a             | 4     | 4     | 2    | 2    | 2    |
| <b>Biological Diversity</b>                                                                                                    |                                              |                 |                 |       |       |      |      |      |
| After 10 years (1,000 acres)                                                                                                   |                                              |                 |                 |       |       |      |      |      |
| mature forest                                                                                                                  | 59                                           | 46              | 43              | 65    | 51    | 55   | 56   | 52   |
| old-growth forest                                                                                                              | 55                                           | 52              | 40              | 3     | 18    | 52   | 54   | 56   |
| After 100 years (1,000 acres)                                                                                                  |                                              |                 |                 |       |       |      |      |      |
| mature forest                                                                                                                  | 164                                          | 72              | 16              | 22    | 28    | 167  | 71   | 98   |
| old-growth forest                                                                                                              | 99                                           | 56              | 61              | 14    | 29    | 65   | 71   | 81   |
| <b>Riparian Trend</b> (200 years: +, -, 0)                                                                                     | +                                            | +               | +               | -     | +     | +    | +    | +    |
| <b>Dominant Woodpecker Populations</b>                                                                                         |                                              |                 |                 |       |       |      |      |      |
| (% of potential, 10 years)                                                                                                     | 65                                           | 61              | 57              | 52    | 53    | 64   | 65   | 63   |
| (% of potential, 100 years)                                                                                                    | 75                                           | 85              | 45              | 30    | 33    | 90   | 75   | 66   |
| <b>Elk Habitat</b> (10 years) <sup>7</sup>                                                                                     |                                              |                 |                 |       |       |      |      |      |
| No. of watersheds improving                                                                                                    | 4                                            | 6               | 0               | 3     | 6     | 4    | 6    | 7    |
| No. of watersheds unchanged                                                                                                    | 1                                            | 0               | 7               | 0     | 1     | 1    | 0    | 0    |
| No. of watersheds declining                                                                                                    | 2                                            | 1               | 0               | 4     | 0     | 2    | 1    | 0    |
| <b>Threatened and Endangered Species</b>                                                                                       |                                              |                 |                 |       |       |      |      |      |
| Northern Spotted Owl Suitable Habitat Acres                                                                                    |                                              |                 |                 |       |       |      |      |      |
| BLM-administered land (1,000 acres)                                                                                            |                                              |                 |                 |       |       |      |      |      |
| After 10 years                                                                                                                 | 112                                          | 100             | n/a             | 73    | 80    | 107  | 112  | 114  |
| After 100 years                                                                                                                | 260                                          | 143             | n/a             | 41    | 65    | 252  | 147  | 193  |



Table 2. Summary of Environmental Consequences, Comparison of Alternatives (continued)

| Effects                                                                  | Allocation/Management Actions by Alternative |                 |                 |     |     |     |     |
|--------------------------------------------------------------------------|----------------------------------------------|-----------------|-----------------|-----|-----|-----|-----|
|                                                                          | RMP <sup>1</sup>                             | PA <sup>2</sup> | NA <sup>3</sup> | A   | B   | C   | E   |
| Marbled Murrelet Habitat Acres                                           |                                              |                 |                 |     |     |     |     |
| BLM-administered lands (1,000 acres)                                     |                                              |                 |                 |     |     |     |     |
| After 10 years                                                           | 96                                           | NE              | n/a             | 62  | 69  | 92  | 93  |
| After 100 years                                                          | 265                                          | NE              | n/a             | 12  | 15  | 60  | 113 |
| Bald eagle nest sites protected                                          | 7                                            | 7               | 7               | 7   | 7   | 7   | 7   |
| Potential Snowy Plover Habitat                                           | +                                            | +               | 0               | 0   | 0   | +   | +   |
| Potential Aleutian Canada Goose Habitat                                  | +                                            | +               | 0               | 0   | 0   | +   | +   |
| Potential Peregrine Falcon Habitat                                       | +                                            | +               | 0               | 0   | 0   | +   | +   |
| Visual Resources (10 years; +, -, 0)                                     | +                                            | +               | 0               | -   | -   | +   | -   |
| <b>Wild and Scenic Rivers (study river segments, 10 years)</b>           |                                              |                 |                 |     |     |     |     |
| Number with outstandingly remarkable values (ORVs) beneficially affected | 0                                            | 0               | 0               | 0   | 0   | 1   | 2   |
| Number with ORVs unaffected                                              | 7                                            | 7               | 6               | 6   | 6   | 6   | 5   |
| Number with ORVs adversely affected                                      | 0                                            | 0               | 1               | 1   | 1   | 0   | 0   |
| <b>Recreation Use (capability to meet 10-year demand (Yes, No))</b>      |                                              |                 |                 |     |     |     |     |
| Off-highway travel                                                       | Yes                                          | Yes             | Yes             | Yes | Yes | Yes | No  |
| Motorized travel                                                         | Yes                                          | Yes             | Yes             | Yes | Yes | Yes | Yes |
| Nonmotorized travel                                                      | Yes                                          | Yes             | No              | No  | No  | Yes | Yes |
| Camping                                                                  | Yes                                          | Yes             | No              | No  | No  | No  | Yes |
| Hunting                                                                  | Yes                                          | Yes             | Yes             | Yes | Yes | Yes | No  |
| Picnicking, studying nature, etc.                                        | Yes                                          | Yes             | No              | No  | No  | Yes | Yes |
| Fishing                                                                  | Yes                                          | Yes             | Yes             | Yes | Yes | Yes | Yes |
| Boating                                                                  | Yes                                          | Yes             | No              | No  | No  | No  | Yes |
| Swimming, general waterplay                                              | Yes                                          | Yes             | Yes             | No  | No  | Yes | Yes |
| Winter sports                                                            | Yes                                          | Yes             | Yes             | Yes | Yes | Yes | Yes |

Table 2. Summary of Environmental Consequences, Comparison of Alternatives (continued)

| Effects                                                                                         | Allocation/Management Actions by Alternative |                 |                 |       |       |                 |
|-------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------|-----------------|-------|-------|-----------------|
|                                                                                                 | RMP <sup>1</sup>                             | PA <sup>2</sup> | NA <sup>3</sup> | A     | B     | C D E           |
| <b>Timber</b>                                                                                   |                                              |                 |                 |       |       |                 |
| Commercial forest land available for timber management (percent)                                | 20.0                                         | 45.6            | 81.3            | 85.8  | 78.5  | 68.8 51.8 35.2  |
| <b>Socioeconomic Conditions (10 years)</b>                                                      |                                              |                 |                 |       |       |                 |
| Planning area jobs dependent on BLM Resources (Baseline 2,294)                                  | 774                                          | NE              | 2,499           | 2,832 | 2,641 | 1,165 1,148 983 |
| Planning area annual personal income dependent on BLM Resources (\$ million) (Baseline 47.5)    | 11.5                                         | NE              | 48.2            | 55.0  | 50.6  | 19.9 19.5 16.2  |
| Average annual Western Oregon O&C receipts distributed to counties (\$ million) (Baseline 63.4) | 25.8                                         | NE              | 130.0           | 169.4 | 154.2 | 48.1 54.1 39.7  |

<sup>1</sup> RMP = Resource Management Plan<sup>2</sup> PA = Preferred Alternative in Draft RMP<sup>3</sup> NA = No Action Alternative<sup>4</sup> Tons of slash burned correlates directly with the level of emissions.<sup>5</sup> Cumulative effects, all ownerships.<sup>6</sup> The planning area was divided into 28 analytical watersheds. Seven of those, where BLM administers substantial acreage, were analyzed.<sup>7</sup> The planning area was divided into 7 elk habitat areas where BLM administers substantial acreage.

Abbreviations used in this table:

n/a = Not Available

NE = No Estimate

0 = No Change

- = Declining

+ = Improving





# Coos Bay District Resource Management Plan

# Resource Management Plan





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## The Planning Area

The Coos Bay District Resource Management Plan (RMP) describes management of approximately 329,700 acres of land in Oregon administered by the U.S. Department of the Interior, Bureau of Land Management (BLM) Coos Bay District. Within the planning area there are also approximately 12,150 acres of non-federal land with federal subsurface mineral estate administered by BLM. (Note: Tables in the RMP except for Table 1 show district managed lands total 329,600 acres. These tables are derived from the operations inventory or geographic information system data bases, which do not include approximately 100 acres acquired since the commencement of the planning process.)

Table 1 summarizes BLM-administered land in the planning area by county.

The land is located in western Oregon as shown on Map 1. (All maps are included in the accompanying map packet.) Land status is shown on Map 2. BLM-administered lands are in the portions of the planning area located in the western slopes of the Oregon Coast Range. They are predominately forested with stands of Douglas-fir and drain into a number of different coastal rivers. Population is centered in and near Reedsport, Elkton, Coos Bay/North Bend, Coquille, Myrtle Point, Powers, Bandon, Port Orford, Gold Beach and Brookings.

## Purpose and Need

As discussed in the *Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (hereafter referred to as the SEIS), the RMP responds to two needs: the need for forest habitat, and the need for forest products.

The need for forest habitat is the need for a healthy forest ecosystem with habitat that will support populations of native species and includes protection for riparian areas and waters. This need was reflected by President Clinton at the April 2, 1993, Forest Conference in Portland, Oregon.

The need for forest products from forest ecosystems is the need for a sustainable supply of timber and other forest products that will help maintain the stability of local and regional economies and contribute valuable resources to the national economy on a predictable and long-term basis. This need also was reflected by President Clinton at the Forest Conference.

The Resource Management Plan (RMP) was developed after consideration of the following:

- Public comments at open house meetings and in correspondence.

**Table 1. BLM-Administered Land in the Planning Area by County (In Acres)**

| County  | O&C     | CBWR   | PD     | Acquired | Other | Total Surface <sup>1</sup> | Reserved Minerals |
|---------|---------|--------|--------|----------|-------|----------------------------|-------------------|
| Coos    | 96,968  | 59,702 | 9,723  | 249      | 0     | 166,642                    | 7,828             |
| Curry   | 79      | 0      | 31,785 | 105      | 0     | 31,969                     | 2,589             |
| Douglas | 121,441 | 636    | 8,430  | 6        | 0     | 130,513                    | 1,735             |
| Lane    | 0       | 0      | 555    | 0        | 0     | 555                        | 0                 |
| Totals  | 218,488 | 60,338 | 50,493 | 360      | 0     | 329,679                    | 12,152            |

<sup>1</sup> Acreages based on March 1993 surveys taken from Master Title Plats, does not include acres gained through accretion, loss by reliction or approximately 19 acres associated with unsurveyed islands. Does not include acres exchanged since March 1993.



## Resource Management Plan

- Comments from other government agencies.
- BLM staff analysis of the consequences of alternatives.
- Legal mandates of Federal laws and executive orders.
- Decisions made in the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl* and its Attachment A (hereafter referred to as the SEIS ROD).
- Requirements of Bureau policy.

The RMP was developed under the requirements of the Federal Land Policy and Management Act (FLPMA) through the use of an interdisciplinary planning process. This RMP is written in compliance with the National Environmental Policy Act (NEPA) and related Council on Environmental Quality regulations.

Management of the Oregon and California revested railroad lands (O&C) is governed by a variety of statutes, including the O&C Lands Act, FLPMA, the Endangered Species Act, and the Clean Water Act. The O&C Lands Act requires the Secretary of the Interior to manage O&C lands for permanent forest production; however, such management must also be in accord with sustained-yield principles. Further, that Act requires that management of O&C lands protect watersheds, regulate streamflow, provide for recreational facilities, and contribute to the economic stability of local communities and industries. The Act does not require the Secretary to harvest all old-growth timber nor all commercial timber as rapidly as possible or according to any particular schedule. The Secretary has discretion to determine how to manage the forest on a sustained-yield basis that provides for permanency of timber production over a long-term period. The Secretary must necessarily make judgments, informed by as much information as possible, about what kind of management will lead to permanent forest production that satisfies the principle of sustained yield.

O&C lands must also be managed in accordance with other environmental laws such as the Endangered Species Act and the Clean Water Act. Some provisions of these laws take precedence over the O&C Lands Act. For instance, the Endangered Species Act (ESA) requires the Secretary to ensure that management of O&C lands will not likely result in jeopardy to listed species or destruction or

adverse modification of their critical habitat. The ESA directs the Secretary and all federal agencies to utilize their authorities to carry out programs for the conservation and recovery of listed species. Section 5(a) of the Act also directs that: "the Secretary, and the Secretary of Agriculture with respect to the National Forest System, shall establish and implement a program to conserve fish, wildlife, and plants, including those which are listed as endangered species or threatened species pursuant to Section 4 of this Act" (16 U.S.C. § 1534[a]). Although several northern spotted owl recovery plans have been proposed, the Secretary has not yet adopted final recovery plans for either the northern spotted owl or the marbled murrelet. The SEIS ROD's late-successional and riparian reserve concepts are important building blocks in the development of recovery plans to achieve the conservation and recovery of those species.

One purpose of the Endangered Species Act is the preservation of ecosystems upon which endangered and threatened species depend. A forward-looking land management policy would require that federal lands be managed in a way to minimize the need to list species under the ESA. Additional species listings could have the effect of further limiting the O&C Lands Act's goal of achieving and maintaining permanent forest production. This would contribute to the economic instability of local communities and industries, in contravention of a primary objective of Congress in enacting the O&C Lands Act. That Act does not limit the Secretary's ability to take steps now that would avoid future listings and additional disruptions.

Protection of watersheds and regulation of streamflow are explicit purposes of forest production under the O&C Lands Act. Riparian reserves, including those established on O&C lands under the RMP, are designed to restore and maintain aquatic ecosystem functions. Together with other components of the aquatic conservation strategy, riparian reserves will provide substantial watershed protection benefits. Riparian reserves will also help attain and maintain water quality standards which are a fundamental aspect of watershed protection. Both riparian reserves and late-successional reserves will help regulate streamflows by moderating peak streamflows and attendant adverse impacts to watersheds.



# Relationship of the RMP to BLM Policies, Programs and Other Plans

The BLM in western Oregon developed five other RMPs concurrently with this one. The six RMPs together cover all BLM-administered lands in western Oregon. Some lands administered by the Eugene District to the north, and the Roseburg and Medford Districts to the east, adjoin lands being addressed in this plan. On other lands these districts administer there is shared management of certain resource or administrative features (e.g., watersheds and road networks). Cooperation is occurring in the planning for management of these lands.

The Draft RMP/EIS was supplemented by the SEIS. The SEIS ROD, signed jointly by the Secretary of the Interior and the Secretary of Agriculture, required the Bureau to incorporate the land-use allocations and standards and guidelines in that decision in the Bureau's RMPs for western Oregon. The RMP is intended to be consistent with the SEIS ROD; any apparent inconsistencies are oversights or misinterpretations of SEIS ROD language. The Final SEIS describes the environmental impacts which arise from those directions. This RMP incorporates the analysis in that Final SEIS.

The RMP incorporates the following records of decision by reference:

- *Northwest Area Noxious Weed Control Program*
- *Western Oregon Program - Management of Competing Vegetation*
- *Pacific Yew Management Program*

BLM's Final *Oregon Wilderness* EIS was published in December 1989. It addresses two wilderness study areas in the Coos Bay District (Zwagg Island and North Sisters Rocks), and will lead to recommendations to Congress regarding designation of these areas. Pending Congressional action, the wilderness values in these areas will be protected.

Any finding made in the record of decision for this RMP that certain river segments studied herein are suitable for designation under the Wild and Scenic Rivers Act is a preliminary administrative finding. The finding will receive further review and possible

modification by the Director, BLM; Secretary of the Interior; or the President of the United States. To facilitate that review, after completion of this RMP and its record of decision, the BLM may elect or be required to prepare a study report to support recommendations to Congress for designation of specific rivers or river segments. Final decisions have been reserved by Congress unless the Governor nominates a river to the Secretary of the Interior, who may then decide to designate it.

Management on the North Spit of Coos Bay and the New River area could be impacted by the final decisions under the Coastal Barriers Resources Act. If either of these areas are designated, Bureau actions would be modified to conform with the purposes and intent of the Act.

Management of approximately 59,100 acres, or some portion thereof, of BLM-administered lands located in eastern Coos County could be impacted by the proposed *Self Sufficiency Plan of the Coquille Indian Tribe*. A portion of that plan proposes establishment of the "Coquille Forest" in the headwaters of the Coquille River drainage, with a transfer of jurisdiction from the BLM to the Bureau of Indian Affairs as a trustee for the Coquille Indian Tribe. Bureau actions would be modified to conform with the decisions of Congress on the recommendations of the Secretary of Interior on the Plan.

## Planning Process

The BLM's planning process has nine steps:

1. Identify issues, concerns and opportunities.
2.
  - a. Develop planning criteria.
  - b. Develop State Director's guidance.
3. Collect inventory data and information.
4. Analyze the management situation.
5. Formulate alternatives.
6. Estimate effects of alternatives.
7. Select the Preferred Alternative and publish Draft RMP/EIS.
8.
  - a. Select the Resource Management Plan and publish Proposed RMP/FEIS.
  - b. Respond to any protests, and publish RMP and Record of Decision (ROD).
9. Implement, monitor and evaluate the RMP.

Publication of this document constitutes completion of Step 8b. Public involvement has occurred at several steps in the process.



The planning process is designed to help the BLM identify the uses of BLM-administered lands desired by the public and consider those uses to the extent consistent with the laws established by Congress and the policies of the executive branch of the federal government regarding management of those lands.

Where BLM manages only the subsurface mineral estate, the RMP addresses only the management of BLM-administered minerals.



# The Resource Management Plan

## Description

The purpose of this section is to describe the Coos Bay District resource management plan (RMP). This section includes descriptions of:

- Concepts underlying the plan (vision, strategy, and major principles).
- Land use allocations and resource programs in the plan.
- Miscellaneous guidance such as coordination and consultation, use of the completed plan, and monitoring.

The RMP was developed partially in response to public comments related to the Bureau of Land Management's August 1992 draft resource management plans for western Oregon. In addition, the plan incorporates the land use allocations and management direction from the Record of Decision (ROD) for the *Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl* (SEIS). Finally the plan was slightly modified in response to public comments and protests on the September 1994 Proposed Resource Management Plans for western Oregon. The approved RMP incorporates the following nonsubstantive changes from the Proposed RMP:

- Language revisions intended to clarify some management direction.
- Language revisions intended to strengthen the link between the approved RMP and the 1994 *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl and Standards and Guidelines for Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl*.
- Revisions that incorporate guidelines issued by the Regional Ecosystem Office since the issuance of the 1994 Record of Decision named above. Such guidelines may clarify or interpret the 1994 Record of Decision.

## Vision

The Bureau of Land Management will manage land and natural resources under its jurisdiction in western Oregon to help enhance and maintain the ecological health of the environment and the social well being of human populations.

This vision is supported by several basic principles:

- Natural resources can be managed to provide for human use and a healthy environment.
- Resource management must be focused on ecological principles to reduce the need for single resource or single species management.
- Stewardship, the involvement of people working with natural processes, is essential for successful implementation.
- The Bureau of Land Management (BLM) cannot achieve this vision alone but can, by its management processes and through cooperation with others, be a significant contributor to its achievement.
- A carefully designed program of monitoring, research and adaptation will be the change mechanism for achieving this vision.

## Strategy

Lands administered by the BLM will be managed to maintain healthy, functioning ecosystems from which a sustainable production of natural resources can be provided. This management strategy is called ecosystem management and involves the use of ecological, economic, social, and managerial principles to achieve healthy and sustainable natural systems. Ecosystem management emphasizes the complete ecosystem instead of individual components and looks at sustainable systems and products that people want and need.

The building blocks for this strategy are comprised of several major land use allocations—Riparian Reserves, Late-Successional Reserves, and the Matrix which includes General Forest Management Areas and Connectivity/Diversity Blocks. These land use allocations have differing management direction and are located and configured in the landscape to support overall ecosystem function and to meet the vision for management of federal lands in western Oregon. The strategy considers a variety of special



purpose management areas such as recreation sites, wild and scenic rivers, and visual resource management areas.

Each land use allocation will be managed according to specific objectives and management actions/direction. During initial implementation of the plan, the stated objectives and management actions/direction will provide the direction and limits that govern actions and also provide the principles that specify the environmental conditions or levels to be achieved and maintained. The stated objectives and management actions/direction will be refined as BLM gains experience in implementing the plan and applying the adaptive management concepts for specific geographic areas.

The major land use allocations of the RMP are as follows:

| Land Allocations                       | Acres <sup>1</sup> |
|----------------------------------------|--------------------|
| Congressional Reserves                 | 600                |
| Late-Successional Reserves             | 136,800            |
| District Defined Reserves <sup>2</sup> | 20,400             |
| Riparian Reserves                      | 89,600             |
| General Forest Management Area         | 55,300             |
| Connectivity/Diversity Blocks          | 6,600              |
| Total                                  | 309,300            |

<sup>1</sup> Allocations do not have any overlapping designations.

<sup>2</sup> District Defined Reserves include areas designated for Special Management Areas, Existing or Potential Recreation Sites/Areas, TPCC Unavailable Lands, and Threatened and Endangered Species Habitat.

A summary of all land use allocations and management actions/direction is presented in Appendix A.

Maps of RMP land use allocations are located in the accompanying map packet. (Riparian Reserves are not mapped.)

Two major management concepts underlay the objectives and management actions/direction: (1) Ecological Principles for Management of Late-Successional Forests, and (2) the Aquatic Conservation Strategy. These concepts are summarized below.

## Ecological Principles for Management of Late-Successional Forests

One goal of this RMP is to maintain late-successional and old-growth species habitat and ecosystems on federal lands. A second goal is to maintain biological diversity associated with native species and ecosystems in accordance with laws and regulations.

All land use allocations described in this plan will contribute to these two goals. For instance, Late-Successional and Riparian Reserves and many special management areas (e.g., areas of critical environmental concern) will be managed to enhance and/or maintain late-successional forest conditions. The General Forest Management Area and Connectivity/Diversity Blocks will be managed to retain late-successional forest legacies (e.g., coarse woody debris, green trees, snags, and late-successional forest patches). These and other land use allocations and resource programs are described in detail below.

See the SEIS ROD (Appendix B) for additional information about ecological principles for management of late-successional forests.

## Aquatic Conservation Strategy

The Aquatic Conservation Strategy was developed to restore and maintain the ecological health of watersheds and their aquatic ecosystems on public lands. The strategy would protect salmon and steelhead habitat on federal lands managed by the Forest Service and Bureau of Land Management within the range of the Pacific Ocean anadromy.

The Aquatic Conservation Strategy is designed to meet the following objectives:

- Maintain and restore the distribution, diversity, and complexity of watershed and landscape-scale features to ensure protection of the aquatic systems to which species, populations, and communities are uniquely adapted.
- Maintain and restore spatial and temporal connectivity within and between watersheds. Lateral, longitudinal, and drainage network connections include floodplains, wetlands,



upslope areas, headwater tributaries, and intact refugia. These lineages must provide chemically and physically unobstructed routes to areas critical for fulfilling life history requirements of aquatic and riparian-dependent species.

- Maintain and restore the physical integrity of the aquatic system, including shorelines, banks, and bottom configurations.
- Maintain and restore water quality necessary to support healthy riparian, aquatic, and wetland ecosystems. Water quality must remain in the range that maintains the biological, physical, and chemical integrity of the system and benefits survival, growth, reproduction, and migration of individuals composing aquatic and riparian communities.
- Maintain and restore the sediment regime under which an aquatic ecosystem evolved. Elements of the sediment regime include the timing, volume, rate, and character of sediment input, storage, and transport.
- Maintain and restore instream flows sufficient to create and sustain riparian, aquatic, and wetland habitats and to retain patterns of sediment, nutrient, and wood routing (i.e., movement of woody debris through the aquatic system). The timing, magnitude, duration, and spatial distribution of peak, high, and low flows must be protected.
- Maintain and restore the timing, variability, and duration of floodplain inundation and the water table elevation in meadows and wetlands.
- Maintain and restore the species composition and structural diversity of plant communities in riparian zones and wetlands to provide adequate summer and winter thermal regulation, nutrient filtering, appropriate rates of surface erosion, bank erosion, and channel migration and to supply amounts and distributions of coarse woody debris sufficient to sustain physical complexity and stability.
- Maintain and restore habitat to support well-distributed populations of native plant, invertebrate, and vertebrate riparian-dependent species.

The components of the Aquatic Conservation Strategy are Riparian Reserves, Key Watersheds, Watershed Analysis, and Watershed Restoration.

## Riparian Reserves

See Riparian Reserves in the Land Use Allocation section.

## Key Watersheds

A system of Key Watersheds that serve as refugia is crucial for maintaining and recovering habitat for at-risk stocks of anadromous salmonids and resident fish species. These refugia include areas of high quality habitat and areas of degraded habitat. Key Watersheds with high quality conditions will serve as anchors for the potential recovery of depressed stocks. Those of lower quality habitat have high potential for restoration and will become future sources of high quality habitat with the implementation of a comprehensive restoration program.

There are two types of Key Watersheds—Tier 1 and Tier 2. Tier 1 watersheds contribute directly to conservation of at-risk anadromous salmonids, bull trout, and resident fish species. They also have a high potential of being restored as part of a watershed restoration program. Tier 2 watersheds do not contain at-risk fish stocks, but they are important sources of high quality water.

Key Watersheds in the district are listed in Table 2, and their locations are shown on Map 3. All Key Watersheds on Table 2 are Tier 1; there are no Tier 2 Watersheds in the district.

Key Watersheds overlay portions of all land use allocations in the district and place additional management requirements or emphasis on activities in those areas. The non-interchangeable component of the allowable sale quantity attributable to Key Watersheds is approximately 0.5 MMCF (3 MMBF).

## Management Actions/Direction

- In Key Watersheds, prepare watershed analyses prior to resource management activity, including timber harvest. Until completion of watershed analyses, proceed with minor activities—such as those categorically excluded under the NEPA regulations (except timber harvest)—contingent on their consistency with Aquatic Conservation Strategy objectives. Apply Riparian Reserve management actions/direction.
- Reduce existing road mileage within Key Watersheds. If funding is insufficient to



**Table 2. Key Watersheds in the Coos Bay District**

| Key Watershed Name                | Tier | Acres  |        |
|-----------------------------------|------|--------|--------|
|                                   |      | Total  | BLM    |
| Upper Smith River                 | 1    | 5,000  | 3,200  |
| North Fork Smith River            | 1    | 43,700 | 3,200  |
| Upper Fiddle Creek                | 1    | 6,400  | 1,200  |
| Wassen Creek                      | 1    | 17,800 | 6,800  |
| Franklin Creek                    | 1    | 4,600  | 100    |
| Paradise Creek                    | 1    | 11,900 | 6,400  |
| Tioga Creek                       | 1    | 24,600 | 15,600 |
| Upper North Fork Coquille River   | 1    | 5,400  | 4,100  |
| North Fork Coquille, Cherry Creek | 1    | 8,300  | 6,100  |
| South Fork Coquille               | 1    | 22,800 | 8,400  |
| Dry Creek                         | 1    | 11,900 | 100    |
| Elk River                         | 1    | 20,400 | 700    |
| North Fork Chetco                 | 1    | 20,400 | 8,400  |

- implement reductions, do not construct (nor authorize through discretionary permits) a net increase in road mileage in Key Watersheds.
- Give highest priority to watershed restoration in Key Watersheds.

## Watershed Analysis

For watershed analysis requirements, see the Watershed Analysis section (toward the end of this section) and the SEIS ROD (Appendix B).

## Watershed Restoration

Watershed restoration will be an integral part of a program to aid recovery of fish habitat, riparian habitat, and water quality. The program's most important components are control and prevention of road-related runoff and sediment production, restoration of the condition of riparian vegetation, and restoration of instream habitat complexity. Other restoration opportunities include meadow and wetland restoration and mine reclamation.

## Management Actions/Direction

- Prepare watershed analyses and plans prior to restoration activities. See the Watershed Analysis section.

- Focus watershed restoration on removing some roads and, where needed, upgrading those that remain in the system.
- Apply silvicultural treatments to restore large conifers in Riparian Reserves.
- Restore stream channel complexity. Instream structures will only be used in the short term and not as a mitigation measure.

Additional information about the Aquatic Conservation Strategy is in the SEIS ROD (Appendix B).

## Land Use Allocations and Resource Programs

### Introduction

This section provides a description of objectives, land use allocations, and management actions/direction for this RMP. The term "land use allocations" is used in two ways. First, it pertains to the major land use allocation categories derived from the SEIS and its ROD (e.g., Riparian Reserves and Late-Successional Reserves) and the still relevant allocations of the Coos Bay District Draft Resource Management Plan. The second use pertains to data



and text describing specific allocations (e.g., acres, miles, and number of sites) under each land use allocation and resource program category.

The rest of the Land Use Allocation and Resource Program section has two major parts:

- Major land use allocations - objectives, allocations, and management actions/direction for each major land use allocation.
- Resource programs - objectives, allocations, and management actions/direction for each resource program.

Although described separately, each of these elements contributes collectively and cumulatively to meeting the overall management strategy and must be considered together to accurately reflect the concept of ecosystem management. There is some duplication of objectives and management actions/direction for land use allocations and resource programs. This duplication, however, enables a reader interested in either topic to find a basic package of related management guidance in one location.

All management actions/direction in this RMP are subject to refinement through planning based on watershed analysis and the adaptive management process. In some areas land use allocations overlap. A hierarchy of allocations and related management actions/direction will be used to guide plan implementation (see the SEIS ROD, Appendix B).

Most resource programs have basic requirements for activities such as inventory, site-specific analysis, planning, and environmental assessment prior to project implementation and monitoring after project implementation. Inherent in the RMP is a BLM commitment to continue these activities in the future. For the sake of simplifying text, these activities are generally not repeated in the management actions/direction that follow.

## Major Land Use Allocations

The land use allocations developed for the SEIS ROD and applicable to BLM-administered lands in the Coos Bay District are Riparian Reserves, Late-Successional Reserves, and Matrix.

Two of the allocations in the SEIS ROD—Congressionally Reserved Areas and

Administratively Withdrawn Areas—are simply recognition of valid resource management decisions in existing or proposed plans. These allocations are fully incorporated in the resource program elements of this proposed resource management plan. They are not described as separate land use allocations in this document.

The following areas in the district are Congressionally Reserved:

- Squaw Island Wilderness
- Cherry Creek Research Natural Area

The types of Administratively Withdrawn areas in the district are:

- Existing and proposed Special Areas
- Existing and proposed recreation areas/sites
- Progeny test sites
- Seed production areas
- Quarry sites
- Non-forest lands
- Lands included in Timber Production Capability Classification (TPCC) categories of Nonsuitable Woodlands and Suitable Woodlands.

Land use allocations in the text are gross acres (i.e., overlaps with other allocations have not been removed).

The SEIS ROD provides management guidance for a specific list of plant and animal species which are, or may be found in the major land use allocation areas (see Appendix C). In this RMP, these species are referred to as “SEIS Special Attention Species”. Management guidance is separated into two categories — “Survey and Manage” and “Protection Buffers”.



## Management Actions/ Direction — Survey and Manage for Amphibians, Mammals, Bryophytes, Mollusks, Vascular Plants, Fungi, Lichens, and Arthropods

Implement the survey and manage provision of the SEIS ROD within the range of SEIS special attention species and the particular habitats they are known to occupy. Table C-1 in Appendix C shows which species are covered by this provision, and which of the following four categories and management actions/direction are to be applied to each:

1. Manage known sites (highest priority).
  - a. Acquire information on these sites, make it available to all project planners, and use it to design or modify activities.
  - b. Protect known sites. For some species, apply specific management treatments such as prescribed fire.
  - c. For rare and endemic fungus species, temporarily withdraw known sites from ground-disturbing activities until the sites can be thoroughly surveyed and site-specific measures prescribed.
2. Survey prior to ground-disturbing activities and manage sites.
  - a. Continue existing efforts to survey and manage rare and sensitive species habitat.
  - b. For species without survey protocols, start immediately to design protocols and implement surveys.
  - c. Within the known or suspected ranges and within the habitat types of vegetation communities associated with the species, survey for:
    - Del Norte salamander
    - Siskiyou Mountains salamander
    - Red tree voles
3. Conduct extensive surveys and manage sites.
  - a. Conduct extensive surveys for the species to find high-priority sites for species management. Specific surveys prior to ground-disturbing activities are not a requirement.
  - b. Conduct surveys according to a schedule that is most efficient and identify sites for protection at that time.
  - c. Design these surveys for efficiency and develop standardized protocols.
  - d. Begin these surveys by 1996.
4. Conduct general regional surveys.
  - a. Survey to acquire additional information and to determine necessary levels of protection for arthropods, fungi species not classed as rare and endemic, bryophytes, and lichens.
  - b. Initiate these surveys no later than Fiscal Year 1996 and complete them within 10 years.
5. For the other species listed in Table C-1 of Appendix C, begin development of survey protocols promptly and proceed with surveys as soon as possible. These surveys will be completed prior to ground-disturbing activities that will be implemented in Fiscal Year 1999 or later. Work to establish habitat requirements and survey protocols may be prioritized relative to the estimated threats to the species as reflected in the SEIS.
6. Conduct surveys at a scale most appropriate to the species.
7. Develop management actions/direction to manage habitat for the species on sites where they are located.
8. Incorporate survey protocols and proposed site management in interagency conservation strategies developed as part of ongoing planning efforts coordinated by the Regional Ecosystem Office.

These surveys will precede the design of all ground-disturbing activities that will be implemented in 1997 or later.



## Management Actions/ Direction — Protection Buffers for Amphibians, Nonvascular Plants, Birds, and Mammals

Provide protection buffers for specific rare and locally endemic species and other species in the upland forest matrix. A list of these species and related management actions/direction are presented in Table C-1 of Appendix C and the section on Special Status and SEIS Special Attention Species and Habitat. These species are likely to be assured viability if they occur within reserves. However, there might be occupied locations outside reserves that will be important to protect as well.

Apply the following management actions/direction:

- Develop survey protocols that will ensure a high likelihood of locating sites occupied by these species.
- Following development of survey protocols and prior to ground-disturbing activities, conduct surveys within the known or suspected ranges of the species and within the habitat types or vegetation communities occupied by the species. See the previous Survey and Manage section for an implementation schedule.
- When located, protect the occupied sites.

See Special Status and SEIS Special Attention Species and Habitat section for additional details.



# Riparian Reserves

The following material summarizes Riparian Reserve direction. Details regarding this direction are in the SEIS ROD (Appendix B.)

## Objectives

See Aquatic Conservation Strategy Objectives.

Provide habitat for special status, SEIS special attention, and other terrestrial species.

## Land Use Allocations

There are approximately 203,200 acres of Riparian Reserves in the district. Calculation of these acres is based on prescribed widths and estimated miles of stream in the various categories described in the SEIS ROD. The widths are intended to provide a high level of fish, wildlife and plant habitat, and riparian protection until watershed and site analysis can be completed. Although Riparian Reserve boundaries on permanently-flowing streams may be adjusted, they are considered to be the approximate widths necessary for attaining Aquatic Conservation Strategy objectives. Post-watershed analysis Riparian Reserve boundaries for permanently-flowing streams will approximate the boundaries described below. Following watershed analysis, Riparian Reserve boundaries for intermittent streams may be different from the existing boundaries. Determination of final boundaries will be based on hydrologic, geomorphic and ecologic processes in a watershed affecting intermittent streams. The widths of Riparian Reserves apply to all watersheds until watershed analysis is completed, a site-specific analysis is conducted and described, and the rationale for final Riparian Reserve boundaries is presented through the appropriate NEPA decision-making process.

Initial Riparian Reserve widths are as follows:

*Fish-bearing streams.* Riparian Reserves consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance (600 feet total, including both sides of the stream channel), whichever is greatest.

*Permanently-flowing, non-fish-bearing streams.* Riparian Reserves consist of the stream and the area on either side of the stream extending from the edges of the active stream channel to the top of the inner gorge, or to the outer edges of the 100-year floodplain, or to the outer edges of riparian vegetation, or to a distance equal to the height of one site-potential tree, or 150 feet slope distance, whichever is greatest.

*Seasonally-flowing or intermittent streams, wetlands less than one acre, and unstable and potentially unstable areas.* This category applies to features with high variability in size and site-specific characteristics. At a minimum the Riparian Reserve will include:

- The extent of unstable and potentially unstable areas.
- The stream channel and the area extending to the top of the inner gorge.
- The stream channel or wetland and the area from the edges of the stream channel or wetland to the outer edges of the riparian vegetation.
- The area extending from the edges of the stream channel to a distance equal to the height of one site-potential tree, or 100 feet slope distance, whichever is greatest.

*Constructed ponds and reservoirs, and wetlands greater than one acre.* Riparian Reserves consist of the body of water or wetland and the area to the outer edges of the riparian vegetation, or to the extent of seasonally-saturated soil, or to the extent of unstable and potentially unstable areas, or to a distance equal to the height of one site-potential tree, or to 150 feet slope distance from the edge of a wetland greater than one acre or the maximum pool elevation of constructed ponds and reservoirs, whichever is greatest. (Riparian vegetation and seasonally-saturated soils will generally constitute a wetland and will be managed as prescribed for wetlands.)

*Lakes and Natural Ponds.* Riparian Reserves consist of the body of water and the area to the outer edges of the riparian vegetation, or to the extent of seasonally-saturated soil, or to the extent of unstable and potentially unstable areas, or to a distance equal to the height of two site-potential trees, or 300 feet slope distance, whichever is greatest. (Riparian vegetation and seasonally-saturated soils will



generally constitute a wetland and will be managed as prescribed for wetlands.)

## **Management Actions/Direction**

As a general rule, management actions/direction for Riparian Reserves prohibit or regulate activities that retard or prevent attainment of Aquatic Conservation Strategy objectives. Watershed analysis and appropriate NEPA compliance will be required to change Riparian Reserves in all watersheds.

Implement the following management actions/direction in Riparian Reserves. (Management actions/direction in this section are supplemented by Best Management Practices in Appendix D.)

### **General**

Apply the management actions/direction in the Special Status and SEIS Special Attention Species and Habitat section.

### **Timber Management**

Neither conduct nor allow timber harvest—including fuelwood cutting—in Riparian Reserves, except as follows:

- Where catastrophic events such as fire, flooding, volcanic, wind, or insect damage result in degraded riparian conditions allow salvage and fuelwood cutting if required to attain Aquatic Conservation Strategy objectives.
- Remove salvage trees only when watershed analysis determines that present and future woody debris needs are met and other Aquatic Conservation Strategy objectives are not adversely affected.
- Apply silvicultural practices for Riparian Reserves to control stocking, re-establish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives.

Riparian Reserve acres are not included in calculations of the allowable sale quantity.

### **Roads Management**

Cooperate with federal, state, and county agencies and work with private parties with road use agreements to achieve consistency in road design,

operation, and maintenance necessary to attain Aquatic Conservation Strategy objectives.

For each existing or planned road, meet Aquatic Conservation Strategy objectives by:

- Completing watershed analyses including appropriate geotechnical analyses (i.e., examining soil and rock conditions in riparian and stream crossings) prior to construction of new roads or landings in Riparian Reserves.
- Minimizing road and landing locations in Riparian Reserves.
- Preparing road design criteria, elements, and standards that govern construction and reconstruction.
- Preparing operation and maintenance criteria that govern road operation, maintenance, and management.
- Minimizing disruption of natural hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow.
- Restricting sidecasting as necessary to prevent the introduction of sediment to streams.
- Avoiding wetlands entirely when constructing new roads.

Determine the influence of each road on the Aquatic Conservation Strategy objectives through watershed analysis. Meet Aquatic Conservation Strategy objectives by:

- Reconstructing roads and associated drainage features that pose a substantial risk.
- Prioritizing reconstruction based on current and potential impact to riparian resources and the ecological value of the riparian resources affected.
- Closing and stabilizing (or obliterating and stabilizing) roads based on the ongoing and potential effects to Aquatic Conservation Strategy objectives and considering short-term and long-term transportation needs.

Design and construct new culverts, bridges, and other stream crossings and improve existing culverts, bridges, and other stream crossings determined to pose a substantial risk to riparian conditions. New structures and improvements will be designed to



accommodate at least the 100-year flood, including associated bedload and debris. Priority for upgrading will be based on the potential impact and the ecological value of the riparian resources affected. Crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.

Minimize sediment delivery to streams from roads. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe. Route road drainage away from potentially unstable channels, fills, and hillslopes.

Provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams (e.g., streams which can be made available to anadromous fish by removing obstacles to passage).

Develop and implement a Road Management Plan or a Transportation Management Plan that will meet the Aquatic Conservation Strategy objectives. As a minimum, this plan will include provisions for the following activities:

- Inspections and maintenance during storm events.
- Inspections and maintenance after storm events.
- Road operation and maintenance giving high priority to identifying and correcting road drainage problems that contribute to degrading riparian resources.
- Traffic regulation during wet periods to prevent damage to riparian resources.
- Establishing the purpose of each road by developing the Road Management Objective.

## **Grazing Management**

Through a planning and environmental analysis process appropriate to the action, adjust or eliminate grazing practices that retard or prevent attainment of Aquatic Conservation Strategy objectives.

Locate new livestock handling and/or management facilities outside Riparian Reserves. For existing livestock handling facilities inside Riparian Reserves, ensure that Aquatic Conservation Strategy objectives are met. Where these objectives cannot be met, require relocation or removal of such facilities.

Limit livestock trailing, bedding, watering, loading, and other handling efforts to those areas and times that will ensure Aquatic Conservation Strategy objectives are met.

## **Recreation Management**

Design new recreational facilities within Riparian Reserves, including trails and dispersed sites, so as not to prevent meeting Aquatic Conservation Strategy objectives. Construction of these facilities should not prevent future attainment of these objectives. For existing recreation facilities within Riparian Reserves, evaluate and mitigate impacts to ensure that these do not prevent, and to the extent practicable contribute to, attainment of Aquatic Conservation Strategy objectives.

Adjust dispersed and developed recreation practices that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where adjustment measures—such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures—are not effective, eliminate the practice or occupancy.

Address attainment of Aquatic Conservation Strategy objectives in Wild and Scenic River and Wilderness management plans.

## **Minerals Management**

Note: The following management actions/direction differ from the standards and guidelines in the SEIS ROD, since the standards and guidelines are not all implementable under current laws and regulations. The more stringent standards and guidelines in the SEIS ROD (Appendix B) will be adopted at such time as changes in current laws and/or regulations authorize their implementation.

For any proposed locatable mining operation in Riparian Reserves—other than notice level or casual use—require the following actions by the operator consistent with 43 CFR 3809 regulations:

- Prepare a Plan of Operations, including a reclamation plan and reclamation bond for all mining operations in Riparian Reserves. Such plans and bonds will address the costs of removing facilities, equipment, and materials; recontouring of disturbed areas to an approved topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvaging and replacing topsoil; and revegetating to meet Aquatic Conservation Strategy objectives.



- Locate structures, support facilities, and roads outside Riparian Reserves. If no alternative to siting facilities in Riparian Reserves exists, locate in a way compatible with Aquatic Conservation Strategy objectives. Road construction will be kept to the minimum necessary for the approved mineral activity. Roads will be constructed and maintained to meet road management standards and to minimize damage to resources in Riparian Reserves. When a road is no longer required for mineral or land management activities, it will be reclaimed. In any case, access roads will be constructed consistent with 43 CFR 3809 and acceptable road construction standards and will minimize damage to resources in Riparian Reserves.
- Avoid locating solid and sanitary waste facilities in Riparian Reserves. If no alternative to locating mine waste (waste rock, spent ore, and tailings) facilities in Riparian Reserves exists, if releases can be prevented, and if stability can be ensured, then:
  - Analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.
  - Locate and design the waste facilities using best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in Riparian Reserves.
  - Reclaim waste facilities after operations to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.
  - Monitor waste and waste facilities after operations to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.
  - Require reclamation bonds adequate to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.

Where an existing operator is in noncompliance at the notice level (i.e., causing unnecessary or undue degradation), require actions similar to those stated above to meet the intent of 43 CFR 3809.

For leasable mineral activity in Riparian Reserves, prohibit surface occupancy for oil, gas, and geothermal exploration and development activities where leases do not exist. Where possible, adjust the stipulations in existing leases to eliminate impacts that retard or prevent the attainment of Aquatic Conservation Strategy objectives, consistent with existing lease terms and stipulations.

Allow development of salable minerals, such as sand and gravel, within Riparian Reserves only if Aquatic Conservation Strategy objectives can be met.

Develop inspection and monitoring requirements and include such requirements in exploration and mining plans and in leases or permits consistent with existing laws and regulations. Evaluate the results of inspection and monitoring to determine if modification of plans, leases, and permits is needed to eliminate impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.

## **Fire/Fuels Management**

Design fuel treatment and fire suppression strategies, practices, and activities to meet Aquatic Conservation Strategy objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies will recognize the role of fire in ecosystem function and identify those instances where fire suppression or fuel management activities could be damaging to long-term ecosystem function.

Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of Riparian Reserves. If the only suitable location for such activities is within the Riparian Reserve, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements. Utilize an interdisciplinary team to predetermine suitable incident base and helibase locations.

Minimize delivery of chemical retardant, foam, or other additives to surface waters. An exception may be warranted in situations where overriding immediate safety imperatives exist, or following a review and recommendation by a resource advisor, when an escape would cause more long-term damage.

Design prescribed burn projects and prescriptions to contribute to attainment of Aquatic Conservation Strategy objectives.



## **Resource Management Plan**

Immediately establish an emergency team to develop a rehabilitation treatment plan needed to attain Aquatic Conservation Strategy objectives whenever Riparian Reserves are significantly damaged by a wildfire or when a prescribed fire is burning outside prescribed parameters.

Until watershed analysis is completed for a watershed, suppress wildfire to avoid loss of habitat and to maintain future management options.

Consider allowing some natural fires to burn under prescribed conditions. This decision will be based on additional analysis and planning.

Consider rapid extinguishing of smoldering coarse woody debris and duff.

Locate and manage water-drafting sites (e.g., sites where water is pumped to control or suppress fires) to minimize adverse effects on riparian habitat and water quality as consistent with Aquatic Conservation Strategy objectives.

## **Lands**

Identify instream flows needed to maintain riparian resources, channel conditions, and fish passage.

Issue leases, permits, rights-of-way, and easements to avoid adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where legally possible, adjust existing leases, permits, rights-of-way, and easements to eliminate adverse effects that retard or prevent the attainment of Aquatic Conservation Strategy objectives. If adjustments are not effective and where legally possible, eliminate the activity. Priority for modifying existing leases, permits, rights-of-way, and easements will be based on the actual or potential impact and the ecological value of the riparian resources affected.

Use land acquisition, exchange, and conservation easements to meet Aquatic Conservation Strategy objectives and facilitate restoration of fish stocks and other species at risk of extinction.

For proposed hydroelectric projects under the jurisdiction of the Federal Energy Regulatory Commission (the Commission), provide timely, written comments regarding maintenance of instream flows and habitat conditions and maintenance/restoration of riparian resources and stream channel integrity. Request the Commission to locate proposed support facilities outside of Riparian

Reserves. For existing support facilities inside Riparian Reserves that are essential to proper management, provide recommendations to the Commission that ensure Aquatic Conservation Strategy objectives are met. Where these objectives cannot be met, provide recommendations to the Commission that such support facilities should be relocated. Existing support facilities that must be located in the Riparian Reserves should be located, operated, and maintained with an emphasis to eliminate adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives.

For other hydroelectric and surface water development proposals in Tier 1 Key Watersheds, require instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. For other hydroelectric and surface water development proposals in all other watersheds, give priority emphasis to instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies.

## **General Riparian Area Management**

Identify and attempt to secure instream flows needed to maintain riparian resources, channel conditions, and aquatic habitat.

Fell trees in Riparian Reserves when they pose a safety risk. Keep felled trees onsite when needed to meet objectives for coarse woody debris retention.

Apply herbicides, insecticides, other toxicants, and other chemicals only in a manner that avoids impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.

Locate water-drafting sites to minimize adverse effects on stream channel stability, sedimentation, and instream flows needed to maintain riparian resources, channel conditions, and fish habitat.

## **Watershed and Habitat Restoration**

Design and implement watershed restoration projects in a manner that promotes long-term ecological integrity of ecosystems, conserves the



genetic integrity of native species, and attains Aquatic Conservation Strategy objectives.

Cooperate with federal, state, local, and tribal agencies, and private landowners to develop watershed-based coordinated resource management plans or other cooperative agreements to meet Aquatic Conservation Strategy objectives.

Prevent watershed and habitat degradation rather than relying on mitigation measures or planned restoration.

## **Fish and Wildlife Management**

Design and implement fish and wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives.

Design, construct, and operate fish and wildlife interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of Aquatic Conservation Strategy objectives. For existing fish and wildlife interpretive and other user-enhancement facilities inside Riparian Reserves, ensure that Aquatic Conservation Strategy objectives are met. Where Aquatic Conservation Strategy objectives cannot be met, relocate or close such facilities.

Cooperate with federal, tribal, and state wildlife management agencies to identify and eliminate wild ungulate impacts that are inconsistent with attainment of Aquatic Conservation Strategy objectives.

Cooperate with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with habitat manipulation, fish stocking, harvest, and poaching that threaten the continued existence and distribution of native fish stocks inhabiting streams with adjacent or nearby federal lands.



# Late-Successional Reserves

The following material summarizes Late-Successional Reserve direction. For details on this direction, see the SEIS ROD (Appendix B).

## Objectives

Protect and enhance conditions of late-successional and old-growth forest ecosystems that serve as habitat for late-successional and old-growth forest-related species including the northern spotted owl and marbled murrelet.

Maintain a functional, interacting, late-successional and old-growth forest ecosystem.

## Land Use Allocations

There are approximately 133,700 acres of mapped Late-Successional Reserves in the district. The five components of this reserve system are:

- Mapped Late-Successional Reserves.

These reserves incorporate Key Watersheds to the extent practicable; some or parts of the most ecologically significant and ecologically significant late-successional forests identified by the Scientific Panel on Late-Successional Forest Ecosystems; and some or parts of the Designated Conservation Areas from the Final Draft Spotted Owl Recovery Plan.

- Late-Successional/Old Growth 1 and 2 areas within Marbled Murrelet Zone 1, as mapped by the Scientific Panel on Late-Successional Forest Ecosystems.
- Occupied Marbled Murrelet Sites.

See Special Status and SEIS Special Attention Species and Habitat section.

- Known Spotted Owl Activity Centers (as of January 1, 1994).

See Special Status and SEIS Special Attention Species and Habitat section.

- Protection Buffers.

See Special Status and SEIS Special Attention Species and Habitat section.

See Map 3 for locations of Late-Successional Reserves. Occupied marbled murrelet sites, known spotted owl activity centers, and protection buffers are unmapped.

## Management Actions/Direction - General

Apply the management actions/direction in the Special Status and SEIS Special Attention Species and Habitat section.

Develop Late-Successional Reserve assessments prior to habitat manipulation.

These assessments may be developed as part of province-level planning or as stand-alone assessments. If developed to stand alone, the assessments will be closely coordinated with subsequent watershed analysis and province-level planning. SEIS ROD standards and guidelines should be refined at the province level prior to development of Late-Successional Reserve assessments. Late-Successional Reserve assessments will generally include:

- History and inventory of overall vegetative conditions within the reserve.
- List of identified late-successional associated species known to exist within the Late-Successional Reserve and information on their locations.
- History and description of current land uses within the reserve.
- Fire management plan.
- Criteria for developing appropriate treatments.
- Identification of specific areas that could be treated under those criteria.
- Proposed implementation schedule tiered to higher order (i.e., larger scale) plans.
- Proposed monitoring and evaluation components to help evaluate if future activities are carried out as intended and achieve desired results.



Only in unusual circumstances will silvicultural treatments, including prescribed fire, precede preparation of this management assessment. Late-Successional Reserve assessments are subject to review by the Regional Ecosystem Office. Until Late-Successional Reserve assessments are completed, fire suppression activities should be guided by land allocation objectives in coordination with local resource management specialists.

Projects and activities within Late-Successional Reserves (including restoration, recreation, projects for public safety, thinning, and salvage) may proceed in fiscal years 1995-96 using initial Late-Successional Reserve assessments done at a level of detail sufficient to assess whether the activities are consistent with the objectives of the Late-Successional Reserves.

Plan and implement non-silvicultural activities inside Late-Successional Reserves that are neutral or beneficial to the creation and maintenance of late-successional habitat.

Using interdisciplinary teams, evaluate other activities not described below and document appropriate guidelines.

Request review by the Regional Ecosystem Office of all activities deemed to have potential adverse effects on Late-Successional Reserve objectives. The Regional Ecosystem Office may develop additional criteria for exempting some additional activities from review.

## **Silviculture**

Plan and implement silvicultural treatments inside Late-Successional Reserves to be beneficial to the creation of late-successional habitat.

If needed to create and maintain late-successional forest conditions, conduct thinning operations in forest stands up to 80 years of age. This will be accomplished by precommercial and/or commercial thinning of stands regardless of origin (e.g., planted after logging or naturally regenerated after fire or blowdown).

## **Salvage**

Limit salvage of dead trees in Late-Successional Reserves to areas where stand-replacing events exceed 10 acres in size and canopy closure has been reduced to less than 40 percent.

Retain all standing live trees including those injured (e.g., scorched) but likely to survive.

Retain snags that are likely to persist until late-successional forest conditions have developed and a new stand is again producing large snags.

Retain adequate quantities of coarse woody debris in a new stand so the future stand will contain amounts similar to naturally regenerated stands. Watershed-level or province-level plans will establish appropriate levels of coarse woody debris to be used. Levels will be typical and will not require retention of all material where it is highly concentrated or too small to contribute to coarse woody debris over the long term.

If essential to reduce future risk of fire or insect damage, conduct salvage that does not meet the preceding management actions/direction. Focus on those areas where there is high risk of large scale disturbance.

Remove snags and logs to reduce hazards to humans along roads and trails and in or adjacent to recreation sites. Leave some material where coarse woody debris is inadequate.

After disturbance in younger stands, develop direction for diameter and biomass retention consistent with the intention of achieving late-successional forest conditions. Where green trees, snags, and logs are present following disturbance, the green tree and snag direction will be applied first and completely satisfied where possible. The biomass left in snags can be credited toward the amount of coarse woody debris biomass needed to achieve management objectives.

Retain logs present on the forest floor before a disturbance event.

Retain coarse woody debris to approximate the species composition of the original stand to help replicate pre-existing suitable habitat conditions.

Deviate from these management actions/direction only to provide reasonable access to salvage sites and feasible logging operations. Limit deviations to as small an area as possible.

## **Road Construction and Maintenance**

Construct roads in Late-Successional Reserves if the potential benefits of silviculture, salvage, and other activities exceed the costs of habitat impairment. If



new roads are necessary to implement a practice that is otherwise in accordance with these guidelines, they will be kept to a minimum, be routed through unsuitable habitat where possible, and be designed to minimize adverse impacts. Alternative access methods—such as aerial logging—will be considered to provide access for activities in reserves.

Remove trees along rights-of-way if they are a hazard to public safety. Consider leaving material onsite if available coarse woody debris is inadequate. Consider topping of trees as an alternative to felling.

## **Fuelwood Gathering**

Permit fuelwood gathering only in existing cull decks, in areas where green trees are marked by silviculturists for thinning, in areas where blowdown is blocking roads, where trees are removed from the roadside to improve sight distance, and in recently harvested timber sale units where down material will impede scheduled post-sale activities or pose an unacceptable risk of future large scale disturbance. In all cases, these activities will comply with management actions/direction for salvage and silvicultural activities.

## **Mining**

Assess the impacts of ongoing and proposed mining activities in Late-Successional Reserves.

Include stipulations in mineral leases and, when legally possible, require operational constraints for locatable mineral activities to minimize detrimental effects to late-successional habitat.

## **Developments**

Neither construct nor authorize new facilities that may adversely affect Late-Successional Reserves.

Review on a case-by-case basis new development proposals that address public needs or provide significant public benefits. They may be approved when adverse effects can be minimized and mitigated. They will be planned to have the least possible adverse impacts on Late-Successional Reserves.

Locate new developments to avoid degradation of habitat and adverse effects on identified late-successional species.

Retain and maintain existing developments—such as campgrounds, utility corridors, and electronic sites—consistent with other management actions/direction for Late-Successional Reserves.

Remove hazard trees along utility rights-of-way and trails and in other developed areas.

## **Land Exchanges**

Consider land exchanges in Late-Successional Reserves if they provide benefits equal to or better than current conditions.

Consider land exchanges especially to improve area, distribution, and quality (e.g., connectivity, shape, and contribution to biodiversity) of Late-Successional Reserves, especially where public and private lands are intermingled.

## **Habitat Improvement Projects**

Design projects to improve conditions for fish, wildlife, and watersheds if they provide late-successional habitat benefits or if their effect on late-successional associated species is negligible.

Design projects for recovery of threatened or endangered species even if they result in some reduction of habitat quality for other late-successional species.

Design and implement watershed restoration projects consistent with Late-Successional Reserve objectives.

## **Range Management**

In coordination with wildlife and fish biologists, implement range-related management activities that do not adversely affect late-successional habitat.

Through a planning and environmental analysis process appropriate to the action, adjust or eliminate grazing practices that retard or prevent attainment of Late-Successional Reserve objectives.

Evaluate effects of existing and proposed livestock management and handling facilities in Late-Successional Reserves to determine if reserve objectives are met. Where objectives cannot be met, relocate livestock management and/or handling facilities.



## **Fire Suppression and Prevention**

As part of watershed analysis, plan fire management for each Late-Successional Reserve.

Emphasize maintaining late-successional habitat in wildfire suppression plans.

Use minimum impact suppression methods for fuels management in accordance with guidelines for reducing risks of large-scale disturbances.

During actual fire suppression activities, consult an interdisciplinary team to assure that habitat damage is minimized.

Until a fire management plan is completed for a Late-Successional Reserve or group of reserves, suppress wildfire to avoid loss of habitat and to maintain future management options.

Prepare a specific fire management plan prior to any habitat manipulation activities in Late-Successional Reserves. Specify how hazard reduction and other prescribed fire applications meet the objectives of the Late-Successional Reserve. Until the plan is approved, proposed activities will be subject to review by the Regional Ecosystem Office.

Apply prescribed fire in a manner that retains the amount of coarse woody debris determined through watershed analysis.

Consider allowing some natural fires to burn under prescribed conditions. This decision will be based on additional analysis and planning.

Consider rapidly extinguishing smoldering coarse woody debris and duff.

## **Special Forest Products**

Evaluate whether special forest product harvest activities have adverse effects on Late-Successional Reserve objectives.

Prior to selling special forest products, ensure resource sustainability and protection of other resource values such as special status plant or animal species.

Where special forest product activities are extensive, evaluate whether they have significant effects on late-successional habitat. Restrictions may be appropriate in some cases.

## **Recreational Uses**

Use adjustment measures—such as education, use limitations, traffic control devices, or increased maintenance—when dispersed and developed recreation practices retard or prevent attainment of Late-Successional Reserve objectives.

## **Rights-of-Way, Contracted Rights, Easements, and Special/Temporary Use Permits**

Consider access to nonfederal lands through Late-Successional Reserves and existing right-of-way agreements. Contracted rights, easements, and special/temporary use permits are valid uses in Late-Successional Reserves.

For all new rights-of-way proposals, design mitigation measures to reduce adverse effects on Late-Successional Reserves. Consider alternative routes that avoid Late-Successional Reserves. If rights-of-way must be routed through a reserve, design and locate them to have the least impact on late-successional habitat.

Review all special/temporary use permits. When objectives of Late-Successional Reserves are not being met, attempt to reduce impacts through education or modification of existing permits.

## **Non-native Species**

If introduction of a non-native species is proposed, complete an assessment of impacts and avoid any introduction that would retard or prevent achievement of late-successional objectives.

Evaluate impacts of non-native species (plant and animal) existing within reserves.

Develop plans and recommendations for eliminating or controlling non-native species that are inconsistent with Late-Successional Reserve objectives. Include an analysis of effects of implementing such programs on other species or habitats within Late-Successional Reserves.

## **Protection Buffers**

See the Special Status and SEIS Special Attention Species and Habitat section.



# Matrix (Connectivity/Diversity Blocks and General Forest Management Area)

## Objectives

Produce a sustainable supply of timber and other forest commodities to provide jobs and contribute to community stability.

Provide connectivity (along with other allocations such as Riparian Reserves) between Late-Successional Reserves.

Provide habitat for a variety of organisms associated with both late-successional and younger forests.

Provide for important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as down logs, snags, and large trees.

Provide early-successional habitat.

## Land Use Allocation

In the Matrix, there are approximately 55,300 acres of BLM-administered land in the General Forest Management Area and 6,600 acres in Connectivity/Diversity Blocks. Connectivity/Diversity Blocks vary in size and are distributed throughout the Matrix (see Map 3).

## Management Actions/Direction

Apply the management actions/direction in the Special Status and SEIS Special Attention Species and Habitat section.

Conduct timber harvest and other silvicultural activities in that portion of the Matrix with suitable forest lands, according to management actions/direction summarized below and in the Timber section.

Provide a renewable supply of large down logs well distributed across the Matrix landscape in a manner

that meets the needs of species and provides for ecological functions. Models will be developed for groups of plant associations and stand types that can be used as a baseline for developing prescriptions.

- A minimum of 120 linear feet of logs per acre, averaged over the cutting area and reflecting species mix of the unit, will be retained in the cutting area. All logs shall have bark intact, be at least 16 inches in diameter at the large end, and be at least 16 feet in length. Logs shall be distributed throughout the cutting area, and not piled or concentrated in a few areas. Decay class 1 and 2 logs will be credited toward the total. Where this management action/direction cannot be met with existing coarse woody debris, merchantable material will be used to make up the deficit.
- In areas of partial harvest, apply the same basic management actions/direction, but they can be modified to reflect the timing of stand development cycles where partial harvest is practiced.
- Retain coarse woody debris already on the ground and protect it to the greatest extent possible from disturbance during treatment (e.g., slash burning and yarding) that might otherwise destroy the integrity of the substrate.

Retain green trees and snags throughout the General Forest Management Area as follows:

- Retain 6-8 green conifer trees per acre in regeneration harvest units.
- Retain snags within a timber harvest unit at levels sufficient to support species of cavity-nesting birds at 40 percent of potential population levels. Meet the 40 percent minimum throughout the Matrix with per acre requirements met on average areas no larger than 40 acres.
- In addition to the green tree retention management action/direction, retain green trees for snag recruitment in timber harvest units where there is an identified, near-term (less than 3 decades) snag deficit. These trees do not count toward green-tree retention requirements.

Provide Connectivity/Diversity Blocks spaced throughout the Matrix. Manage the blocks as follows:

- Maintain 25 to 30 percent of each block in late-successional forest at any point in time. Riparian



Reserves and other allocations with late-successional forest count toward this percentage. Blocks may be comprised of contiguous or noncontiguous BLM-administered land. The size and arrangement of habitat within a block will provide effective habitat to the extent possible.

- Manage available forest land on a 150-year area control rotation.
- When an area is regeneration harvested, retain 12-18 green trees per acre.

Modify site treatment practices, particularly the use of fire and pesticides, and modify harvest methods to minimize soil and litter disturbance. Plan and implement treatments to:

- Minimize intensive burning, unless appropriate for certain specific habitats, communities, or stand conditions. Prescribed fires should be planned to minimize the consumption of litter and coarse woody debris.
- Minimize soil and litter disturbance that may occur as a result of yarding and operation of heavy equipment.
- Reduce the intensity and frequency of site treatments.

Retain late-successional forest patches in landscape areas where little late-successional forest persists. This management action/direction will be applied in fifth field watersheds (20 to 200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest. (The assessment of 15 percent will include all federal land allocations in a watershed.) Within such an area, protect all remaining late-successional forest stands. Protection of these stands could be modified in the future when other portions of a watershed have recovered to the point where they could replace the ecological roles of these stands.

Retain 100 acres of the best northern spotted owl habitat as close as possible to a nest site or owl activity center for all known (as of January 1, 1994) spotted owl activity centers.

Conform all management activities within the range of Port-Orford cedar to the guidelines described in the *BLM Port-Orford Cedar Management Guidelines* to mitigate damage caused by *Phytophthora lateralis*. Site-specific analysis for projects within the range of

Port-Orford cedar will consider possible effects on the species.

Additional information about Matrix management is in the SEIS ROD (Appendix B).



# Resource Programs

The following material includes objectives, land use allocations, and management actions/direction for the resource uses and programs that BLM manages in the Coos Bay District. Some of the management actions/direction in the previous land use allocation section are repeated in this section. The intent of this duplication is to give readers a package of related management guidance in one location.

## Air Quality

### Objectives

Continue efforts to meet National Ambient Air Quality Standards, Prevention of Significant Deterioration goals, and the visibility protection plan.

Maintain and enhance air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

Reduce the potential for wildfire emissions through the use of prescribed fire and other fuels management techniques.

### Land Use Allocations

None.

### Management Actions/Direction

By the year 2000, reduce particulate matter emissions and impacts from prescribed burning by 50 percent from the baseline period (1976-1979). This will be accomplished by planning, conducting, monitoring, and, if necessary, adjusting prescribed fire activities in accordance with the Oregon State Implementation Plan and the Oregon Smoke Management Plan (see Fire section).

Reduce broadcast burning in favor of lower intensity under burning. Use emission reduction mitigation measures and smoke dispersal techniques to the greatest extent practical. Wildfire hazard reduction, site preparation, and the use of prescribed fire for species habitat mitigation will be implemented in a manner consistent with ecosystem management.

Where needed, use dust abatement measures on roads during BLM timber harvest operations or other BLM commodity hauling activity. Encourage dust

abatement measures when haulers use BLM roads under permits and right-of-way agreements.

Promote burning of dry fuelwood by making available copies of Oregon Department of Environmental Quality publications to fuelwood purchasers.

Consider alternative emission reduction techniques whenever they are compatible with land allocation objectives and other management actions/direction. See Air Quality Analysis section of the FSEIS for alternative treatments that may be considered during fuels management project design.



# Water and Soils

## Objectives

See objectives for Aquatic Conservation Strategy, Riparian Reserves, and Key Watersheds.

As directed by the Clean Water Act, comply with state water quality requirements to restore and maintain water quality for the protection of recognized beneficial uses of the Mid-Coast, Umpqua South Coast, and Rogue basins.

Improve and/or maintain soil productivity.

## Land Use Allocations

There are no land use allocations specific to water quality or soils. However, Riparian Reserves, Key Watershed provisions, Administratively Withdrawn areas, and timber production capability classifications will assist in meeting water quality and soils management objectives.

## Management Actions/Direction - General

Improve and/or maintain soil and water conditions by closing selected areas to off-highway vehicle use and/or limiting such use to existing or designated roads and trails. See Recreation, Off-Highway Vehicles, for additional details.

## Water

See Management Actions/Direction for Riparian Reserves and Key Watersheds (located in Aquatic Conservation Strategy section).

Continue to implement a nonpoint source management program in cooperation with the U. S. Environmental Protection Agency and the Oregon Department of Environmental Quality.

Continue coordination with the Oregon Department of Environmental Quality for implementation of best management practices that protect beneficial uses of water.

Ensure consistency of management activities with Oregon's *Statewide Water Quality Management Plan*

for forest practices and with Oregon's water quality criteria and guidelines (Oregon Administrative Rule 340-41).

Protect floodplains and wetlands in accordance with Executive Orders 11988 and 11990 and BLM's *Riparian-Wetlands Initiative for the 1990s*.

Design and implement watershed restoration projects that promote long-term ecological integrity of ecosystems, conserve the genetic integrity of native species, and attain Aquatic Conservation Strategy objectives. See Aquatic Conservation Strategy for additional guidance.

Cooperate with federal, state, local, and tribal agencies and private landowners to develop watershed-based coordinated resource management plans or other cooperative agreements to meet Aquatic Conservation Strategy objectives.

Prevent watershed degradation—rather than using mitigation or planned restoration—to correct foreseeable problems caused by management activities. See Best Management Practices (Appendix D) for additional guidance.

Identify and attempt to obtain instream flows needed to maintain riparian resources, channel conditions, aquatic habitat, and water quality.

Locate water-drafting sites to minimize adverse effects on stream channel stability, sedimentation, and instream flows needed to maintain riparian resources, channel conditions, and fish habitat.

Apply herbicides, insecticides, and other chemicals in a manner that avoids impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.

Use land acquisition, exchange, and conservation easements to meet Aquatic Conservation Strategy objectives.

Apply for water rights to support the needs for fire suppression, construction/maintenance (e.g., pump chances, water holes and reservoirs), recreation, and other programs.



# Soils

Apply Best Management Practices during all ground- and vegetation-disturbing activities. See Appendix D for a list of practices.

Minimize disturbance of identified fragile sites (TPCC system Nonsuitable Woodlands and Suitable Woodlands).

Apply fertilizer in the Matrix to enhance soil productivity.



# Wildlife Habitat

## Objectives

See objectives for Late-Successional Reserves, Riparian Reserves, and the Matrix.

Enhance and maintain biological diversity and ecosystem health to contribute to healthy wildlife populations.

## Land Use Allocations

The land use allocations in this RMP are designed to benefit wildlife species—in the aggregate—that use the various seral stages and other habitat areas of the forest.

## Management Actions/Direction - All Land Use Allocations

Use the watershed analysis process to address wildlife habitat issues for individual watersheds. The analysis will help to resolve any concerns identified in applying management actions/direction in this section and those in the Special Status and SEIS Special Attention Species and Habitat section. Where appropriate, wildlife habitat enhancement opportunities will be identified through this process.

Coordinate with the Oregon Department of Fish and Wildlife during planning and implementation of wildlife habitat enhancement projects.

Cooperate with federal, tribal, and state wildlife management agencies to identify and eliminate impacts associated with habitat manipulation, poaching, and other activities that threaten the continued existence and distribution of native wildlife inhabiting federal lands.

## Management Actions/Direction - Riparian Reserves

Design and implement wildlife habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives.

Design, construct, and operate wildlife interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of Aquatic Conservation Strategy objectives. For existing wildlife interpretive and other user-enhancement

facilities inside Riparian Reserves, ensure that Aquatic Conservation Strategy objectives are met. Where Aquatic Conservation Strategy objectives cannot be met, relocate or close such facilities.

Cooperate with federal, tribal, and state wildlife management agencies to identify and eliminate wild ungulate impacts that are inconsistent with attainment of Aquatic Conservation Strategy objectives.

## Management Actions/Direction - Late-Successional Reserves

Design projects to improve conditions for wildlife if they provide late-successional habitat benefits or if their effect on late-successional associated species is negligible.

If introduction of a non-native species is proposed, complete an assessment of impacts and avoid any introduction that would retard or prevent achievement of Late-Successional Reserve objectives.

Evaluate impacts of non-native species existing within Late-Successional Reserves.

Develop plans and recommendations for eliminating or controlling non-native species that are inconsistent with Late-Successional Reserve objectives. Include an analysis of effects of implementing such programs on other species within Late-Successional Reserves.

## Management Actions/Direction - Matrix, including General Forest Management Area and Connectivity/Diversity Blocks

Retain snags within a timber harvest unit at levels sufficient to support species of cavity-nesting birds at 40 percent of potential population levels. Meet the 40 percent minimum throughout the Matrix with per acre requirements met on average areas no larger than 40 acres.

## General Forest Management Area

Retain late-successional forest patches in landscape areas where little late-successional forest persists. This management action/direction will be applied in fifth field watersheds (20 to 200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest. (The



assessment of 15 percent will include all federal land allocations in a watershed.) Within such an area, protect all remaining late-successional forest stands. Protection of these stands could be modified in the future when other portions of a watershed have recovered to the point where they could replace the ecological roles of these stands.

Retain 6-8 green conifer trees per acre after regeneration harvest. Retained trees will be distributed in variable patterns (e.g., single trees, clumps and stringers) to contribute to stand diversity.

In addition to the green tree retention management action/direction, retain green trees for snag recruitment in harvest units where there is an identified, near-term (less than 3 decades) snag deficit. These trees do not count toward green-tree retention requirements.

A minimum of 120 linear feet of logs per acre, averaged over the cutting area and reflecting species mix of the unit, will be retained in the cutting area. All logs shall have bark intact, be at least 16 inches in diameter at the large end, and be at least 16 feet in length. Logs shall be distributed throughout the cutting area, and not piled or concentrated in a few areas. Decay class 1 and 2 logs will be credited toward the total. Where this management action/direction cannot be met with existing coarse woody debris, merchantable material will be used to make up the deficit.

### Connectivity/Diversity Blocks

Provide Connectivity/Diversity Blocks spaced throughout the BLM land base. Manage the blocks as follows:

- Maintain 25 to 30 percent of each block in late-successional forest at any point in time. The percentage of habitat will include habitat in other allocations, such as Riparian Reserves. Blocks may be comprised of contiguous or noncontiguous BLM-administered land. The size and arrangement of habitat within a block should provide effective habitat to the extent possible.
- Retain 12-18 green conifer trees per acre when an area is regeneration harvested. Distribute the retained trees in variable patterns (e.g., single trees, clumps and stringers) to contribute to stand diversity. The management goal for the retained trees and subsequent density management is recovery of old-growth conditions in approximately 100 to 120 years.

- A minimum of 120 linear feet of logs per acre, averaged over the cutting area and reflecting species mix of the unit, will be retained in the cutting area. All logs shall have bark intact, be at least 16 inches in diameter at the large end, and be at least 16 feet in length. Logs shall be distributed throughout the cutting area, and not piled or concentrated in a few areas. Decay class 1 and 2 logs will be credited toward the total. Where this management action/direction cannot be met with existing coarse woody debris, merchantable material will be used to make up the deficit.

### Special Habitats

Using interdisciplinary teams, identify special habitat areas and determine relevant values for protection or management on a case-by-case basis. Of particular importance in these determinations will be the habitat of species that have protection buffers specified in the SEIS ROD.

Use management practices—including fire—to obtain desired vegetation conditions in special habitats.

### Raptors and Great Blue Herons

Maintain the integrity of nest sites, centers of activity, or rookeries.

Install nesting platforms, nest boxes, and other structures to enhance habitat as appropriate.

Establish the following buffers:

### Species Buffer

|                    |                                                                         |
|--------------------|-------------------------------------------------------------------------|
| Osprey             | 1 to 5 acres, depending on site characteristics.                        |
| Golden Eagle       | Protect sufficient acreage around nest site to avoid human disturbance. |
| Red-tailed Hawk    | Up to 1 acre around nest site.                                          |
| Sharp-shinned Hawk | 10-acre management area surrounding nest site.                          |



Cooper's Hawk 15-acre management area surrounding nest site.

Great Blue Heron/Great Egret 250-yard no-disturbance buffer around heron and egret colonies.

## Roosevelt Elk

In elk habitat areas, close and rehabilitate roads unneeded for continued resource management or use. Within the ODFW Tioga Big Game Management Area (approximately 190,200 acres), the goal will be to maintain 1.1 miles of road per section per watershed with a maximum density of 2.9 miles per section per watershed when all classes of road are considered. In the remainder of the district, the goal will be to maintain a density of 2.9 miles of road per section per watershed. Roads to be closed or with restricted access would be primarily local roads and secondary or collector roads.

Close the following habitat areas to public motorized vehicle use: Dean Creek Elk Viewing Area, except for the developed parking area and uncontrolled access roads.

Use seasonal restrictions on public use and management activities where needed to minimize disturbance and harassment of herds.

Keep major game trails clear of slash accumulations caused by thinning projects.

Conduct forage seeding in habitat areas with appropriate seed beds and where compatible with other management objectives.

Maintain visual barriers along roads in high use big game areas.

Consider utilization of landings and roads for the creation of temporary (not to exceed 20 years) or permanent foraging areas where forage is lacking.



# Fish Habitat

## Objectives

See Aquatic Conservation Strategy objectives.

Maintain or enhance the fisheries potential of streams and other waters consistent with BLM's Fish and Wildlife 2000 Plan, the Bring Back the Natives initiative, and other nationwide initiatives.

Promote the rehabilitation and protection of at-risk fish stocks and their habitat.

## Land Use Allocations

There are no specific land use allocations for the fisheries resource. However, Riparian Reserves, Key Watershed provisions, and timber production capability classifications will assist in meeting fish habitat management objectives.

## Management Actions/Direction - Riparian Reserves

Design and implement fish habitat restoration and enhancement activities in a manner that contributes to attainment of Aquatic Conservation Strategy objectives.

Design, construct and operate fish interpretive and other user-enhancement facilities in a manner that does not retard or prevent attainment of Aquatic Conservation Strategy objectives. For existing fish interpretive and other user-enhancement facilities inside Riparian Reserves, ensure that Aquatic Conservation Strategy objectives are met. Where Aquatic Conservation Strategy objectives cannot be met, relocate or close such facilities.

Cooperate with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with habitat manipulation, fish stocking, harvest, and poaching that threaten the continued existence and distribution of native fish stocks inhabiting federal lands.

Cooperate with federal, tribal, and state wildlife management agencies to identify and eliminate wild ungulate impacts that are inconsistent with attainment of Aquatic Conservation Strategy objectives.

Identify instream flows needed to maintain riparian resources, channel conditions, and fish passage.

## Management Actions/Direction - Late-Successional Reserves

Design projects to improve conditions for fish if the projects provide late-successional habitat benefits or if their effect on late-successional associated species is negligible.

## Management Actions/Direction - All Land Use Allocations

Apply the management actions/direction in the Special Status and SEIS Special Attention Species and Habitat section.

Use the watershed analysis process to address at-risk fish species and stocks and their habitat for individual watersheds. Where appropriate, fish habitat enhancement opportunities will be identified through this process.

Coordinate with the Oregon Department of Fish and Wildlife Wild Fish Policy during planning and implementation of fish habitat enhancement projects. Priority will be given to watersheds supporting at-risk fish species and stocks and those requiring extensive restoration.

As identified through watershed analysis, rehabilitate streams and other waters to enhance natural populations of anadromous and resident fish. Possible rehabilitation measures would include, but not be limited to:

- Fish passage improvements
- Instream structures using boulders and log placement to create spawning and rearing habitat
- Placement of fine and coarse materials for overwintering habitat
- Establishment or release of riparian coniferous trees



Possible fish enhancement projects include the following:

| <b><u>Stream</u></b>            | <b><u>Project Type</u></b>                                      |
|---------------------------------|-----------------------------------------------------------------|
| Upper North Fork Coquille River | Rearing pools and winter rearing habitat, riparian enhancement. |
| <b><u>Stream</u></b>            | <b><u>Project Type</u></b>                                      |
| Baker Creek                     | Rearing habitat.                                                |
| Paradise Creek                  | Winter rearing habitat improvement.                             |
| Middle Creek                    | Rearing habitat.                                                |
| Elk Creek                       | Rearing habitat.                                                |
| Yankee Run Creek                | Spawning and rearing habitat.                                   |
| Sandy Creek                     | Winter rearing-deep pool complex.                               |
| Camas Creek                     | Rearing habitat for trout.                                      |
| Steel Creek                     | Spawning and rearing habitat.                                   |
| China Creek                     | Culvert replacement.                                            |
| Alder Creek                     | Rearing pools and winter rearing habitat.                       |
| South Sisters                   | Spawning and rearing creek habitat.                             |
| Crane Creek                     | Rearing pools and winter rearing habitat.                       |
| West Fork Brummit Creek         | Riparian enhancement.                                           |
| Frenchie Creek                  | Passage for anadromous fish.                                    |

See the Special Status and SEIS Special Attention Species and Habitat section and Best Management Practices (Appendix D) for additional fish habitat management actions/direction and conservation practices.



## Special Status and SEIS Special Attention Species Habitat

### Objectives

See the objectives for Late-Successional Reserves, Riparian Reserves, Matrix, and Special Areas.

Protect, manage, and conserve federal listed and proposed species and their habitats to achieve their recovery in compliance with the Endangered Species Act, approved recovery plans, and Bureau special status species policies.

Manage for the conservation of federal candidate and Bureau sensitive species and their habitats so as not to contribute to the need to list and to recover the species.

Manage for the conservation of state listed species and their habitats to assist the state in achieving management objectives.

Protect and manage assessment species where possible so as to not elevate their status to any higher level of concern.

Protect SEIS special attention species so as not to elevate their status to any higher level of concern.

Study, maintain or restore community structure, species composition, and ecological processes of special status plant and animal habitat.

### Land Use Allocations

All of the major land allocations in this plan are designed in part to benefit special status species in the aggregate.

## Management Actions/Direction - Late-Successional Reserves

Design projects for recovery of threatened or endangered animal and plant species even if they result in some reduction of habitat quality for late-successional species. These projects will be designed for least impact to late-successional species.

## Management Actions/Direction - All Land Use Allocations

### Special Status Species

Review all proposed actions to determine whether or not special status species occupy or use the affected area or if habitat for such species is affected. Tables 2 and 3 in Appendix C list the special status plant and animal species known or suspected to occur on the district.

Conduct field surveys according to protocols and other established procedures. This includes surveying during the proper season unless surveys are deemed unnecessary through watershed analysis, project planning, and environmental assessment. For example, field surveys may not be conducted in all cases depending on the number and timing of previous surveys conducted, whether previous surveys looked for all species that a new survey would, and the likelihood of potential habitat. The intensity of field surveys will also vary depending on the same factors.

Consult/conference with the U.S. Fish and Wildlife Service (USFWS) or National Marine Fisheries Service (NMFS) for any proposed action that may affect federal listed or proposed species or their critical or essential habitat. Based on the results of consultation/conferencing, modify, relocate, or abandon the proposed action. Request technical assistance from one of these agencies for any proposed action that may affect federal candidate species or their habitat.

Coordinate with the USFWS, NMFS, and other appropriate agencies and organizations and jointly endeavor to recover federal listed and proposed plant and animal species and their habitats.

Modify, relocate, or abandon a proposed action to avoid contributing to the need to list federal candidate species, state listed species, Bureau sensitive species, or their habitats.

Coordinate and cooperate with the State of Oregon to conserve state-listed species.

Identify impacts of proposed actions, if any, to Bureau sensitive and assessment species as a whole and clearly describe impacts in environmental analyses. As funding permits and as species conservation dictates, actively manage the Bureau sensitive and assessment species.



Retain under federal management, or other appropriate management organization, habitat essential for the survival or recovery of listed and proposed species. Retain habitat of proposed, candidate, or Bureau sensitive species where disposal would contribute to the need to list the species.

Where appropriate opportunities exist, acquire land to contribute to recovery, reduce the need to list, or enhance special status species habitat.

Coordinate with other agencies and groups in management of species across landscapes. Coordination will be accomplished through conservation plans or similar agreements that identify actions to conserve single or multiple species and/or habitats. Such strategies could preclude the need for intensive inventories or modifications to some projects where the conservation plan provides adequate protection for the species and meets the intent of policy.

Where plans exist for species no longer on the special status list, continue with the prescribed conservation actions if determined to be required to avoid relisting or further consideration for listing. In the case of interagency plans or agreements, this determination will be mutually decided. Such plans may be modified as needed based on adequacy of existing range-wide conditions and conservation management.

Pursue opportunities for public education about conservation of species.

Where appropriate, pursue opportunities to increase the number of populations of species under BLM management through land acquisition and/or species reintroduction in coordination with other responsible agencies.

## **SEIS Special Attention Species**

This incorporates the "Survey and Manage" and "Protection Buffer" species and standards and guidelines from the SEIS ROD.

### **Survey and Manage**

Implement the survey and manage provision of the SEIS ROD within the range of SEIS special attention species and the particular habitats that they are known to occupy. Table C-1 in Appendix C shows which species are covered by this provision, and

which of the following four categories and management actions/direction are to be applied to each:

1. Manage known sites (highest priority).
  - a. Acquire and manage information on known sites, make it available to all project planners, and use it to design or modify activities.
  - b. Protect known sites. For some species, apply specific management treatments such as prescribed fire.
  - c. For rare and endemic fungus species, temporarily withdraw 160 acres around known sites from ground-disturbing activities until the sites can be thoroughly surveyed and site-specific measures prescribed.
2. Survey prior to activities and manage sites.
  - a. Continue existing efforts to survey and manage rare and sensitive species habitat.
  - b. For species without survey protocols, start immediately to design protocols and implement surveys.
  - c. Within the known or suspected ranges and within the habitat types of vegetation communities associated with the species, survey for:
    - Del Norte salamander
    - Siskiyou Mountains salamander
    - Red tree voles

These surveys will precede the design of all ground-disturbing activities that will be implemented in 1997 or later.
  - d. For the other species listed in Table C-1 of Appendix C, begin development of survey protocols promptly and proceed with surveys as soon as possible. These surveys will be completed prior to ground-disturbing activities that will be implemented in Fiscal Year 1999 or later. Work to establish habitat requirements and survey protocols may be prioritized relative to the estimated threats to the species as reflected in the SEIS.
  - e. Conduct surveys at a scale most appropriate to the species.



- f. Develop management actions/direction to manage habitat for the species on sites where they are located.
  - g. Incorporate survey protocols and proposed site management in interagency conservation strategies developed as part of ongoing planning efforts coordinated by the Regional Ecosystem Office.
3. Conduct extensive surveys and manage sites.
    - a. Conduct extensive surveys for the species to find high-priority sites for species management. Specific surveys prior to ground-disturbing activities are not a requirement.
    - b. Conduct surveys according to a schedule that is most efficient and identify sites for protection at that time.
    - c. Design these surveys for efficiency and develop standardized protocols.
    - d. Begin these surveys by 1996.
  4. Conduct general regional surveys.
    - a. Survey to acquire additional information and to determine necessary levels of protection for arthropods, fungi species not classed as rare and endemic, bryophytes, and lichens.
    - b. Initiate these surveys no later than Fiscal Year 1996 and complete them within 10 years.

## Protection Buffers

Provide protection buffers for specific rare and locally endemic species and other species in the upland forest matrix. A list of these species and related management actions/direction are presented in Table C-1 of Appendix C and the section on Special Status and SEIS Special Attention Species and Habitat. These species are likely to be assured viability if they occur within reserves. However, there might be occupied locations outside reserves that will be important to protect as well.

Apply the following management actions/direction:

- Develop survey protocols that will ensure a high likelihood of locating sites occupied by these species.

- Following development of survey protocols and prior to ground-disturbing activities, conduct surveys within the known or suspected ranges of the species and within the habitat types or vegetation communities occupied by the species. See the previous Survey and Manage section for an implementation schedule.
- Manage known habitat of special attention species requiring protection buffers as follows:

### - Nonvascular Plants

#### *Aleuria rhenana*

- Conduct ecological studies and surveys to determine localities. Protect known populations if surveys continue to indicate that the population is rare.
- Defer ground-disturbing activities.

The implementation schedule for this species is the same as for survey and manage components 1 and 2.

#### *Otidea leporina*, *O. onotica*, and *O. smithii*

- Protect older forests from ground disturbance where the species are located.

The implementation schedule for these species is the same as for survey and manage components 1 and 2.

#### *Buxbaumia piperi*

- Survey to determine presence and distribution.
- Where located, maintain decay class 3, 4, and 5 logs and greater than 70 percent closed-canopy forest habitats for shade.

The implementation schedule for this species is the same as for survey and manage components 1 and 3.

#### *Sarcosoma mexicana*

- Survey for locations and protect deep litter layers of older forests where found.



- Defer prescribed burning of understory or other activities that would not retain a deep litter layer.

The implementation schedule for this species is the same as for survey and manage component 3.

#### **- Amphibians**

##### **Siskiyou Mountain Salamander**

- Avoid disturbance of talus throughout occupied sites, especially on moist, north-facing slopes.
- Retain around the outer periphery of known sites a buffer of at least the height of one site potential tree, or 100 feet horizontal distance, whichever is greater.

##### **Del Norte Salamander**

- Avoid any ground-disturbing activity that would disrupt the talus layer where this species occurs.
- Once sites are identified, maintain 40 percent canopy closure of trees within the site and within a buffer of at least the height of one site potential tree, or 100 feet horizontal distance, whichever is greater, surrounding the site.
- Conduct partial harvest if 40 percent canopy closure can be retained. In such cases, logging will be conducted using helicopters or high-lead cable systems to avoid compaction or disturbance of the talus.

The implementation schedule for this species is the same as for survey and manage components 1 and 2.

#### **- Birds**

##### **Black-backed Woodpecker**

- Maintain adequate numbers of large snags and green-tree replacements for future snags within this species range in appropriate forest types. Where feasible, green-tree replacements for future snags can be left in groups to reduce blowdown.

- Where safety considerations permit, retain all snags 20 inches or larger in dbh.

- For the longer term, provide for sufficient numbers of green trees to provide for 100 percent population potential for this species. For the Black-backed Woodpecker this equates to 0.12 conifer snags per acre in forest habitats. Snags must be at least 17 inches in dbh or larger and in the hard decay stages.

For newly discovered habitat of other special attention species requiring protection buffers, apply the management action/direction in the SEIS Record of Decision.

## **Animals**

### **Roosting Bats**

Conduct surveys to determine the presence of roosting bats, including fringed myotis, silver-haired bats, long-eared myotis, long-legged myotis, and pallid bats. Surveys will be conducted according to protocol defined in the SEIS ROD and in any subsequent revisions to the protocol.

As an interim measure, allow no timber harvest within 250 feet of sites containing bats. Develop mitigation measures in project or activity plans involving these sites. The intent of these measures is to protect sites from destruction, vandalism, disturbance from road construction or blasting, or any other activity that could change cave or mine temperatures or drainage patterns.

When Townsend's big-eared bats are found on federal land, notify the Oregon Department of Fish and Wildlife. For any located sites, develop management prescriptions that include special consideration for potential impacts on this species.

## **Listed and Proposed Threatened and Endangered Species - General**

Implement the land use allocations and management actions/direction of this proposed resource management plan that are designed to enhance and maintain habitat for threatened and endangered species.



### **Northern Spotted Owl** (federal threatened species)

In the Matrix, retain 100 acres of the best northern spotted owl habitat as close as possible to a nest site or owl activity center for all known (as of January 1, 1994) spotted owl activity centers.

Fall no trees within 0.25 mile of all active northern spotted owl nest sites from approximately March 1 to September 30 to avoid disturbance and harm to young owls.

With minor exceptions, restrict human activities that could disturb owl nesting—especially use of large power equipment—within 0.25 mile of all active spotted owl nest sites from approximately March 1 to September 30. Restrictions on activities would usually not be required for owl nests and activity centers located near roads or in other areas of permanent human activity.

### **Marbled Murrelet** (federal threatened species)

Conduct two years of survey prior to any human disturbance of marbled murrelet habitat.

Protect contiguous existing and recruitment habitat for marbled murrelets (i.e., stands that are capable of becoming marbled murrelet habitat within 25 years) within a 0.5 mile radius of any site where the birds' behavior indicates occupation (e.g., active nest, fecal ring or eggshell fragments, and birds flying below, through, into, or out of the forest canopy within or adjacent to a stand).

Do not conduct nor allow harvest of timber within occupied marbled murrelet habitat—at least until completion of the Marbled Murrelet Recovery Plan.

During silvicultural treatments of non-habitat within the 0.5-mile circle, protect or enhance suitable or replacement habitat.

Amend or revise management direction as appropriate when the recovery plan is completed.

### **Bald Eagle** (federal threatened species)

Comply with the Pacific Bald Eagle Recovery and Implementation Plans and existing, site-specific habitat management plans.

Provide a 440-yard radius buffer around known and future nest sites. Protect all snags within 550 yards of nest and roost sites. Consider the acquisition of

up to 120 acres every two miles along 5<sup>th</sup> order and larger streams where no publically owned lands exist. Acquire privately-owned lands surrounding bald eagle nests when possible. Manage immediately adjacent lands to reduce the fire hazard in nesting areas.

### **Peregrine Falcon** (federal endangered species)

Comply with the Peregrine Falcon Recovery Plan and existing, site-specific habitat management plans.

### **Aleutian Canada Goose** (federal threatened species)

Comply with the Aleutian Canada Goose Recovery Plan and the New River ACEC Management Plan. Continue to explore opportunities for acquiring potential habitat in the New River area. Coordinate with the USFWS to acquire habitat and population information on Aleutian Canada geese in the New River area.

### **Western Snowy Plover** (federal threatened species)

Coordinate with the Snowy Plover Working Group and the Recovery Team, when established, for management of plover habitat on district lands on the North Spit of Coos Bay and in the New River area. Consider acquisition of parcels within the district that could facilitate recovery of the species. Protect nesting areas from disturbance from human activities and predation. Continue to gather habitat and nesting information on the species in coordination with ODFW, the Oregon Heritage Program, the Dunes National Recreation Area, and USFWS. Continue to improve and maintain habitat for the snowy plover on the North Spit of Coos Bay and at New River through direction provided by the Snowy Plover Working Group and in line with the Recovery Plan when approved.

## **Plants (Listed and Proposed Endangered and Threatened Species) - General**

Implement the land use allocations and management actions/direction of this proposed resource management plan that are designed to enhance and maintain habitat for all endangered and threatened species.



**Western lily (*Lilium occidentale*) (federal proposed)**

Participate in recovery efforts for the western lily. If populations are found on BLM-administered lands, management action/direction will be developed.

Participate in research efforts that may help recover the species, including experimental introduction, seed collection and propagation, inventories, and population monitoring.



# Special Areas

## Objectives

Retain existing research natural areas and existing areas of critical environmental concern that meet the test of continuing need for designation. Retain other special areas. Provide new special areas where needed to maintain or protect important values.

Maintain, protect, or restore relevant and important values of areas of critical environmental concern.

Preserve, protect, or restore native species composition and ecological processes of biological communities (including Oregon Natural Heritage Plan terrestrial and aquatic cells) in research natural areas. These areas will be available for short- or long-term scientific study, research, and education and will serve as a baseline to measure human impacts on natural systems.

Provide and maintain environmental education opportunities in environmental education areas. Control uses to minimize disturbance of educational values.

Powers Environmental Education Area) in accordance with their guidelines in Table 3 until management plans have been completed.

Develop site-specific management plans for new special areas as needed. Protect resource values in new areas pending completion of management plans (see Table 3 for management guidelines). Management plans will address other possible actions such as land acquisition, recreational development, use of prescribed fire, visitor use, and interpretation.

## Land Use Allocations

| <u>Special Area Category</u>                                       | <u>Number</u> | <u>Approximate Acres</u> |
|--------------------------------------------------------------------|---------------|--------------------------|
| Areas of Critical Environmental Concern <sup>1</sup>               | 10            | 8,830                    |
| Areas of Critical Environmental Concern/<br>Research Natural Areas | 1             | 570                      |
| Environmental Education Areas                                      | 1             | 70                       |

<sup>1</sup> (This category includes only areas with ACEC designation. Double designated areas—such as areas of critical environmental concern/research natural areas—are not included in this entry.)

See Map 4 and Table 3 for locations and acres of site-specific existing and proposed special areas, respectively.

## Management Actions/Direction

Manage special areas for the previously designated areas (Cherry Creek ACEC/RNA, New River ACEC,



**Table 3. Management of Existing and New Special Areas**

| <b>Name</b>                             | <b>Approx.<br/>Acres</b> | <b>Off-Highway<br/>Vehicle<br/>Designation</b> | <b>Leasable<br/>Mineral<br/>Entry</b> | <b>Locatable/<br/>Salable<br/>Mineral<br/>Entry</b> | <b>Timber<br/>Harvest</b> |
|-----------------------------------------|--------------------------|------------------------------------------------|---------------------------------------|-----------------------------------------------------|---------------------------|
| <b>Existing</b>                         |                          |                                                |                                       |                                                     |                           |
| Cherry<br>Creek<br>RNA/ACEC             | 570                      | Closed                                         | Open-NSO                              | Closed                                              | Not<br>Available          |
| New River<br>ACEC                       | 880                      | Closed/<br>Limited                             | Open-NSO                              | Closed                                              | Not<br>Available          |
| Powers<br>Environ.<br>Education         | 70                       | Closed                                         | Open-NSO                              | Closed                                              | Not<br>Available          |
| <b>New</b>                              |                          |                                                |                                       |                                                     |                           |
| Wassen<br>Creek<br>ACEC                 | 3,440                    | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| North<br>Spit<br>ACEC                   | 580                      | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| North<br>Fork<br>Coquille<br>River ACEC | 290                      | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| Tioga<br>Creek<br>ACEC                  | 40                       | Closed                                         | Open-NSO                              | Closed                                              | Not<br>Available          |
| China Wall<br>ACEC                      | 240                      | Closed                                         | Open-NSO                              | Closed                                              | Not<br>Available          |
| Upper<br>Rock Creek<br>ACEC             | 460                      | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| North Fork<br>Hunter Creek<br>ACEC      | 1,730                    | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| Hunter<br>Creek Bog<br>ACEC             | 570                      | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |
| North Fork<br>Chetco River<br>ACEC      | 600                      | Limited                                        | Open-NSO                              | Closed                                              | Not<br>Available          |

Abbreviations used in this Table:

ACEC = Area of Critical Environmental Concern

RNA = Research Natural Area

NSO = No Surface Occupancy



## Cultural Resources Including American Indian Values

### Objectives

Identify cultural resource localities and manage them for public, scientific, and cultural heritage purposes.

Conserve and protect designated cultural resources for future generations.

Support ecosystem management by providing information on long-term environmental change and the interactions between humans and the environment in the past.

Continue to fulfill government-to-government and trust responsibilities to appropriate American Indian tribes regarding heritage and religious concerns.

### Land Use Allocations

Sites with significant values will be protected from management actions and from vandalism to the extent possible. Cultural resource sites are not mapped in this plan or described in detail due to the sensitivity of resource values.

The Coos Bay District manages five cultural resource sites on the National Register of Historic Places.

### Management Actions/Direction

Evaluate cultural resource sites to determine their potential for contributing to public, cultural heritage, and/or scientific purposes.

Investigate landscape features such as bogs, ponds, packrat middens, and cultural sites that contain information regarding long-term environmental change.

Develop mechanisms for describing past landscapes and the role of humans in shaping those landscapes,

Address the management of cultural resources through watershed analyses and project plans.

Develop educational and interpretive programs—as part of the Adventures in the Past initiative—to increase public awareness and appreciation of cultural resources.

Develop partnerships with local American Indian tribes and other interested parties to accomplish cultural resource objectives.

Take appropriate law enforcement or other actions when necessary to protect cultural resources. Such actions may include physical protection measures such as riprapping and barrier installations to reduce deterioration.

Develop memoranda of understanding with federally recognized Indian tribes and other Indian groups to provide for appropriate consideration of their heritage and religious concerns. These groups may include the Coquille Indian Tribe and the Confederated Tribes of the Siletz Indian.

Acquire significant cultural resource properties for public, cultural heritage, and scientific purposes.



# Visual Resources

## Objectives

Manage all BLM-administered land to meet the following visual quality objectives:

- VRM Class I areas: Preserve the existing character of landscapes.
- VRM Class II areas: Retain the existing character of landscapes.
- VRM Class III areas: Partially retain the existing character of landscapes.
- VRM Class IV areas: Allow major modifications of existing character of landscapes.

Emphasize management of scenic resources in selected high-use areas to retain or preserve scenic quality.

## Land Use Allocations

| <u>VRM Class</u> | <u>Approximate Acres</u> |
|------------------|--------------------------|
| I                | 600                      |
| II               | 6,600                    |
| III              | 14,700                   |
| IV               | 307,700                  |

See Map 5 for the location of visual resource management classes.

**VRM Class I:** The Congressionally-designated Squaw Island Wilderness, Zwagg Island, and North Sisters Rocks Wilderness Study Areas; and Cherry Creek Area of Critical Environmental Concern/ Research Natural Area.

**VRM Class II or Class III** (see Map 5): Available forest land adjacent (within 0.25 mile) to developed recreation sites, state and federal highways, and state scenic waterways would be managed as inventoried. Representative Class II areas include lands along Highway 101, the Umpqua and Rogue River corridors, Mill Creek Road, and the Coquille Valley. Lands adjacent to most county roads in rural residential areas (such as along the Coos River, Coos Bay Wagon Road, and Smith River Road) are primarily Class III.

**VRM Class IV:** All other available forest land except as noted under Rural Interface Area Management. This includes lands within the General Forest Management Area and Connectivity/Diversity Blocks as well as lands adjacent to most logging access roads and other seldom seen areas.

The remaining lands (non-forest, nonsuitable woodland, suitable woodland-low site, and lands allocated for uses other than for timber production) would be managed as inventoried.

## Management Actions/Direction

Address visual resource management issues when conducting watershed analysis.

Use the visual resource contrast rating system during project level planning to determine whether or not proposed activities will meet VRM objectives. Use mitigation measures to reduce visual contrasts.

Provide for natural ecological changes in VRM Class I areas. Some very limited management activities may occur in these areas. The level of change to the characteristic landscape should be very low and must not attract attention. Changes should repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

Manage VRM Class II lands for low levels of change to the characteristic landscape. Management activities may be seen but should not attract the attention of the casual observer. Changes should repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

Manage VRM Class III lands for moderate levels of change to the characteristic landscape. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements of form, line, color, texture, and scale found in the predominant natural features of the characteristic landscape.

Manage VRM Class IV lands for moderate levels of change to the characteristic landscape. Management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the effect of these activities through careful location, minimal disturbance, and repeating the basic elements of form, line, color, and texture.



# Wild and Scenic Rivers

## Objectives

Manage designated segments of the National Wild and Scenic Rivers System by protecting their outstandingly remarkable values, and maintain and enhance the natural integrity of river-related values.

Protect outstandingly remarkable values identified on BLM-administered lands within the study corridors of eligible river segments studied and administratively found suitable for inclusion as components of the National Wild and Scenic Rivers System.

Provide interim protective management for outstandingly remarkable values identified on BLM-administered lands along river segments determined eligible but not studied for inclusion as components of the National Wild and Scenic Rivers System.

Manage the natural integrity of river-related values to maintain or enhance the highest tentative classification determined for rivers found eligible or studied for suitability.

## Land Use Allocations

There are no designated National Wild and Scenic River Segments on BLM-administered lands in the Coos Bay District, nor have any been found suitable for designation and inclusion into the national system.

The corridor width for rivers found eligible or studied for suitability is generally defined as 0.25 mile on either side of the river (approximately 0.5-mile wide corridor). Technically, these corridors are not land use allocations. None of the seven eligible rivers studied under the RMP process have been found suitable. However, if Congress passes legislation to designate them, they will be automatically added to the allocations of the RMP.

## Management Actions/Direction

Provide the following types of interim protection on river segments found eligible or suitable for inclusion as components of the National Wild and Scenic Rivers System:

- **Eligible and/or suitable recreational rivers:** Exclude timber harvest in the riparian reserves, moderately restrict development of leasable and salable minerals, and protect a segment's free-

flowing values and identified Outstandingly Remarkable Values.

- **Eligible and/or suitable scenic rivers:** Exclude timber harvest in the riparian reserve, provide VRM Class II management in the 0.5-mile wide corridor, and protect a segment's free-flowing values and identified Outstandingly Remarkable Values.
- **Eligible and/or suitable wild rivers:** Exclude timber harvest and other disturbing activities within the 0.5-mile wide corridor.

Upon completion of the ROD for this resource management plan, release from interim protection all river segments found not suitable for inclusion as components of the national system.



# Wilderness and Wilderness Study Areas

## Objectives

Manage the use of resources within the designated Squaw Island Wilderness to preserve the undisturbed natural integrity of the area.

Maintain the wilderness character of the Zwagg Island and North Sisters Rocks Wilderness Study Area and the Cherry Creek Instant Study Area to comply with the Bureau's Wilderness Interim Management Policy.

## Land Use Allocations

| <u>Area Name</u>                        | <u>Wilderness Status</u> | <u>Approximate Acreage</u> |
|-----------------------------------------|--------------------------|----------------------------|
| Squaw Island Wilderness                 | Designated               | 3                          |
| Zwagg Island and North Sisters Rock WSA | Study Area               | 8                          |
| Cherry Creek ISA                        | Study Area               | 570                        |

See Map 4 for the location of these areas.

## Management Actions/Direction

Follow interim management guidelines for wilderness study and instant study areas until decisions are made by Congress. Do not authorize action that would diminish the suitability of these lands as wilderness. Take appropriate actions following Congressional decision.

Revise the approved wilderness management plan for Squaw Island Wilderness to address attainment of Aquatic Conservation Strategy objectives and continue to implement the plan's management actions.



# Rural Interface Areas

## Objectives

Consider the interests of adjacent and nearby rural landowners—including residents—during analysis, planning, and monitoring related to managed rural interface areas. These interests include personal health and safety, improvements to property, and quality of life. Determine how landowners might be, or are, affected by activities on BLM-administered lands.

## Land Use Allocations

Managed rural interface areas (RIAs) encompass approximately 2,100 acres of BLM-administered land within 0.25 mile of private lands zoned for 1- to 5-acre, or 5- to 20-acre, lots located throughout the district (see Map 6). None of these acres are included in the Matrix.

## Management Actions/Direction

Work with local governments to:

- Improve the BLM data base regarding private land planning/zoning designations and residential development near BLM-administered land.
- Provide information to local planners regarding BLM land allocations in RIAs and the management objectives and guidelines for these lands.
- Develop design features and mitigation measures that will minimize the possibility of conflicts between private and federal land management.
- Monitor the effectiveness of design features and mitigation measures in RIAs.

As a part of watershed analysis and project planning, work with local individuals and groups—including fire protection districts—to identify and address concerns related to possible impacts of proposed management activities on rural interface areas.

Use design features and mitigation measures to avoid/minimize impacts to health, life, property, and quality of life. Examples include different harvest regimes, hand application rather than aerial application of herbicides and pesticides, and hand

piling slash for burning as opposed to broadcast burning. Monitor the effectiveness of design features and mitigation measures.

Eliminate or mitigate public hazards such as abandoned mine tunnels and quarries.

Manage rural interface areas using visual resource management class III standards (unless an area is classified as visual resource management class I or II).

Reduce unauthorized public use of non-through or local roads within rural interface areas and within 0.25 mile of existing dwellings. Gates and other types of traffic barriers such as guardrails, berms, ditches, and log barricades will be used as appropriate. These actions are needed to reduce public health and safety hazards, fire risk, and vandalism to private property.

Encourage dust abatement measures when haulers use BLM roads under contracts, permits, and right-of-way agreements.

Where needed reduce natural fuel hazards on BLM-administered lands in rural interface areas.



# Socioeconomic Conditions

## Objectives

Contribute to local, state, national and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.

Provide amenities (e.g., recreation facilities, protected special areas, and high quality fisheries) that enhance communities as places to live, work, and visit.

## Land Use Allocations

There are no specific land use allocations related to socioeconomic conditions. However, allocations such as the General Forest Management Area can assist in meeting socioeconomic objectives.

## Management Actions/Direction

Support and assist the State of Oregon Economic Development Department's efforts to help rural, resource-based communities develop and implement alternative economic strategies as a partial substitute for declining timber-based economies. Aid and support could include:

- Increased coordination with state and local governments and citizens to prioritize BLM management and development activities.
- Increased emphasis on management of special forest products.
- Recreation development and other activities identified by BLM and the involved communities as benefiting identified economic strategies.

Improve wildlife and fish habitat to enhance hunting and fishing opportunities and to increase the economic returns generated by these activities.

Improve viewing opportunities for watchable wildlife at the Dean Creek Elk Viewing Area, New River ACEC, and Coos Bay Shorelands.

Plan and design forest management activities to produce a sustained yield of products to support local and regional economic activity. A diversity of forest products (timber and non-timber) will be

offered to support large and small commercial operations and provide for personal use.

Pursue opportunities for development of resource-based attractions at other specific locations such as the Coos Bay Shorelands, New River ACEC, Cape Blanco, and Gregory Point (Bal'diyaka) pending the completion of activity plans and available funding. These areas offer unique sets of resources that have broad appeal to the tourism-orientated visitors to the area and offer potential for diversification of the local economy.

Continue to participate as a member organization in Oregon Coastal Environments Awareness Network (OCEAN) to help foster educational and economic opportunities associated with the region's natural and cultural resource base.

Continue partnership efforts to plan, develop, and operate the proposed Bal'diyaka Cultural Heritage Interpretive Center.

Improve or develop numerous recreation sites, areas, trails, and Back Country Byways that can play a role in enhancing tourism activity within the district (see Recreation).



# Recreation

## Objectives

Provide a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.

Manage scenic, natural, and cultural resources to enhance visitor recreation experience expectations and to satisfy public land users.

Support locally-sponsored tourism initiatives and community economic strategies by providing recreation projects and programs that benefit both short- and long-term implementation.

Manage off-highway vehicle use on BLM-administered land to protect natural resources, provide visitor safety, and minimize conflicts among various users.

Enhance recreation opportunities provided by existing and proposed Watchable Wildlife areas and National Back Country Byways.

Continue to provide nonmotorized recreation opportunities and create additional opportunities where consistent with other management objectives.

Manage special and extensive recreation management areas in a manner consistent with BLM *Recreation 2000: A Strategic Plan* and *Oregon-Washington Public Lands Recreation Initiative*.

## Land Use Allocations

Allocations by Recreation Management Category are displayed in Table 4.

See Map 7 for locations and Table 5 for a list of recreation sites and areas for the RMP.

## Management Actions/Direction - Riparian Reserves

Design and construct new recreational facilities within Riparian Reserves—including trails and dispersed sites—in a manner that does not interfere with meeting Aquatic Conservation Strategy objectives. Construction of these facilities should not prevent future attainment of these objectives. For existing recreation facilities within Riparian Reserves,

evaluate and mitigate impacts to ensure that these do not prevent, and to the extent practicable contribute to, attainment of Aquatic Conservation Strategy objectives.

Adjust dispersed and developed recreation practices that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where adjustment measures such as education, use limitations, traffic control devices, increased maintenance, relocation of facilities, and/or specific site closures are not effective, eliminate the practice or occupancy.

## Management Actions/Direction - Late-Successional Reserves

Retain and maintain existing recreation developments consistent with other management actions/direction for Late-Successional Reserves.

Use adjustment measures—such as education, use limitations, traffic control devices, or increased maintenance—when dispersed or developed recreation practices retard or prevent attainment of Late-Successional Reserve objectives.

Neither construct nor authorize new facilities that may adversely affect Late-Successional Reserves.

Review on a case-by-case basis new recreation development proposals. They may be approved when adverse effects can be minimized and mitigated.

Locate new recreation developments to avoid degradation of habitat and adverse effects on identified late-successional species.

Remove hazard trees along trails and in developed recreation areas.

## Management Actions/Direction - All Land Use Allocations

In addition to the guidelines for late-successional and riparian reserves, manage recreation resources in accordance with the following guidelines:

### General

Enhance travel and recreation management through increased emphasis on interpretive and informational signs and maps. Identify on informational handouts at field locations all major travel routes within the planning area. Prepare a district-wide travel map for



**Table 4. Land Use Allocations by Recreation Management Category**

| Recreation Management Category                   | Number | Acres <sup>1</sup> | Miles |
|--------------------------------------------------|--------|--------------------|-------|
| Recreation Sites                                 |        |                    |       |
| Existing                                         | 11     | 1,655              |       |
| Proposed                                         | 12     | 410                |       |
| Recreation Trails                                |        |                    |       |
| Existing                                         | 4      |                    | 4     |
| Proposed                                         | 8      |                    | 38-52 |
| Special Recreation Management Areas <sup>2</sup> |        |                    |       |
| Existing                                         | 4      | 3,700              |       |
| Proposed                                         | 3      | 25,700             |       |
| Off-Highway Vehicle Use Areas                    |        |                    |       |
| Open                                             |        | 80                 |       |
| Limited                                          |        | 326,600            |       |
| Closed                                           |        | 3,000              |       |
| Back Country Byways                              |        |                    |       |
| Existing                                         | 0      |                    | 0     |
| Proposed                                         | 5      |                    | 155   |

<sup>1</sup> Approximate Acres<sup>2</sup> Does not include potential acquisitions to expand existing or proposed SRMAs.



**Table 5. Existing and Proposed Recreation Sites, Areas, Trails, and Back Country Byways****Recreation Sites****Existing**

Loon Lake <sup>1</sup>  
 East Shore Loon Lake <sup>1</sup>  
 Smith River Falls  
 Vincent Creek  
 Laverne Park <sup>2</sup>  
 Big Tree  
 Park Creek  
 Burnt Mountain Cabin  
 North Spit Boat Ramp <sup>3</sup>  
 Frona Park <sup>2</sup>  
 Bear Creek  
 Sixes River <sup>4</sup>  
 Palmer Butte

**Proposed**

Big Bend  
 Smith River Log Dump  
 Smith River Falls Boat Ramp  
 Fawn Creek Boat Ramp  
 Vincent Creek Boat Ramp  
 Umpqua Lighthouse  
 North Spit Public Fishing Dock <sup>6</sup>  
 McKinley Camp  
 Tioga Basin  
 East Fairview Boat Ramp  
 Rock Prairie Park <sup>2</sup>  
 Rock Prairie Boat Ramp  
 Middle Creek Park <sup>2</sup>  
 Judge Hamilton Park <sup>2</sup>  
 Cape Blanco  
 South Sisters Rock

**Special Recreation Management Areas****Existing**

Loon Lake/East Shore <sup>5</sup>  
 Dean Creek Elk Viewing Area <sup>5</sup>  
 Coos Bay Shorelands <sup>5</sup>  
 New River <sup>5</sup>

**Proposed**

Tioga  
 Gregory Point (Bal'diyaka)  
 Sixes River

**Trails****Existing**

Loon Lake Waterfall  
 Big Tree  
 Brummit Fir (Doerner Fir)  
 New River

**Proposed**

Roman Nose/Kentucky Creek  
 Wassen Creek  
 McKinley Camp  
 Upper Rock Creek  
 Camp Myrtlewood  
 North Fork Hunter Creek  
 Hunter Creek Bog  
 Palmer Butte

**Back Country Byways****Existing**

None

**Proposed**

Smith River Road  
 South Sisters-Oxbow Access Road  
 Mill Creek/Loon Lake/Tyee  
 Coos Bay Wagon Road  
 Myrtle Point to Sitkum Road

<sup>1</sup> These two sites comprise the Loon Lake/East Shore SRMA.

<sup>2</sup> Existing or Proposed Coos County Parks.

<sup>3</sup> Site is within the Coos Bay Shorelands SRMA.

<sup>4</sup> This site is part of the proposed Sixes River SRMA.

<sup>5</sup> SRMA includes proposed acquisitions through exchange or easements.

<sup>6</sup> Proposed additional facility at the existing North Spit Boat Ramp site.



public distribution. These actions would support state and local strategies to encourage tourism.

In addition to the existing and potential recreation sites, areas, and trails under the RMP, the district would consider additional sites and areas for recreational use and development as warranted by increased recreation needs and demands, opportunities to enhance local economic vitality, or where new recreation opportunities arise. Additional land acquisitions to enhance recreation resource opportunities would be identified and evaluated on a case-by-case basis through watershed analysis and activity-level planning.

Where appropriate and compatible with other resource management objectives, BLM would work with the private sector and not-for-profit organizations to develop suitable sites and provide recreation facilities, management, and services on BLM-administered lands. Recreation lease opportunities or proposals would be considered on a case-by-case basis to provide for or enhance recreational use and enjoyment of public lands, and/or stimulate investment and economic diversity in the planning area.

Manage recreation areas to minimize disturbance to a number of fungus and lichen species known to occur within these areas. Follow survey and manage actions/direction as stated in the introduction to Land Use Allocations and Resource Programs.

## **Recreation Sites and Trails**

Continue to operate and maintain 11 developed recreation sites and 4 developed trails (see Table 5).

Designate developed recreation sites as fire suppression areas (intensive) and fire fuels management areas. These designations will reduce fire hazards and protect investments. Restrictions on fire suppression equipment and activities will be required in the Loon Lake, East Shore Loon Lake, Smith River Falls, Big Tree, Park Creek, Bear Creek, and Sixes River recreation areas or sites. Specific equipment restrictions will be identified in management plans for these sites and areas.

Manage timber within developed or proposed recreation sites/areas for purposes of removing hazard trees, providing space for additional facilities and activity areas, and providing desired regeneration of the forest canopy.

Maintain potential for recreation development in 13 sites, including 5 boat ramps and the North Spit

public fishing dock, and 8 trail locations (see Table 5). Develop potential sites and trails as funding becomes available.

Pursue mineral withdrawals for existing developed recreation sites and for proposed recreation sites when development is approved.

Implement no action that will compromise the purpose of developed sites/areas which are under existing Recreation and Public Purposes Act leases to other agencies. When existing leases for these sites/areas expire, reevaluate their relevance, on a case-by-case basis, in light of current BLM management objectives.

## **Special Recreation Management Areas**

Continue to manage four existing Special Recreation Management Areas (SRMAs), designate two new SRMAs (Sixes River and Tioga), and maintain potential to develop one new SRMA (Gregory Point). Expand the four existing SRMAs (see Table 5) through planned land acquisitions (exchanges, fee purchase, or easement acquisitions). Address SRMA issues and prioritize projects in watershed analyses. Manage Dean Creek SRMA according to the existing management plan for the Elk Viewing area. Prepare a management plan for the Loon Lake Sixes River and Tioga SRMAs, complete ongoing management plans for the New River and Coos Bay Shorelands SRMAs, and prepare project plans as needed.

## **Extensive Recreation Management Areas**

Address extensive recreation management area issues and prioritize projects in watershed analyses. Prepare project plans as needed.

## **Back Country Byways**

Designate and facilitate use of up to five new Back Country Byways (see Table 5). Install signing and develop interpretive brochures and waysides to facilitate use.

Coordinate planning, designation, and management of Back Country Byways with adjoining BLM districts, county governments, chambers of commerce, regional tourism alliances, adjacent landowners, and the U. S. Forest Service.



## **Off-Highway Vehicles**

Designate the majority of BLM-administered land open to off-highway vehicle (OHV) use on designated roads and trails (see Table 6).

Close or continue to manage as "closed" the following sites/areas to OHV use (approximately 3,000 acres):

- Wilderness Areas
- Wilderness Study Areas
- Cherry Creek Research Natural Areas
- Progeny Test Sites/Seed Orchards
- Big Tree Recreation Site
- Tioga Creek ACEC
- China Wall ACEC
- Powers Environmental Education Area
- Most BLM-administered lands in the New River ACEC
- Fenced Snowy plover areas on the North Spit of Coos Bay
- Dean Creek Elk Viewing Area, except for the developed parking and access roads

Limit OHV use to designated roads throughout most of the District including the following sites/areas (approximately 326,600 acres):

- Developed and proposed recreation sites/areas.
- Late-Successional Reserves.
- Riparian Reserves.
- Proposed ACECs (Wassen Creek, North Spit, North Fork Coquille River, Upper Rock Creek, North Fork Hunter Creek, Hunter Creek Bog, and North Fork Chetco River).
- Close and rehabilitate roads that are not needed for continued resource management or use. Within the ODFW Tioga Big Game Management Area (approximately 190,200 acres), the goal will be to maintain 1.1 miles of road per section per watershed with a maximum density of 2.9 miles

per section per watershed when all classes of road are considered. In the remainder of the district, the goal will be to maintain a density of 2.9 miles of road per section per watershed. Roads to be closed or with restricted access would be primarily local roads, and secondary or collector roads.

Manage the 80-acre Umpqua Lighthouse site as open to unrestricted access by OHVs.

Where compatible with other resource management objectives, closed roads would be available to the public for non-motorized access for recreational pursuits including hiking, horseback riding, mountain biking, and walk-in hunting. Similarly, closed roads would be available for linking by trails to provide a network of non-motorized recreation opportunities.

Prepare an implementation plan for OHV use designations.



**Table 6. Off-Highway Vehicle Use Designations (in Acres <sup>1</sup>)**

| Site/Area Name                         | OHV Designation Categories                      |                                               |              |           |
|----------------------------------------|-------------------------------------------------|-----------------------------------------------|--------------|-----------|
|                                        | Limited to<br>Designated<br>Roads and<br>Trails | Limited to<br>Existing<br>Roads and<br>Trails | Closed       | Open      |
| Loon Lake/East Shore SRMA              | 140                                             |                                               |              |           |
| Dean Creek Elk Viewing SRMA            |                                                 |                                               | 1,040        |           |
| Smith River Falls                      | 80                                              |                                               |              |           |
| Vincent Creek                          | 5                                               |                                               |              |           |
| Big Bend                               | 200                                             |                                               |              |           |
| Smith River Log Dump                   | 5                                               |                                               |              |           |
| Umpqua Lighthouse                      |                                                 |                                               |              | 80        |
| Wassen Creek ACEC                      | 3,440                                           |                                               |              |           |
| Big Tree                               |                                                 |                                               | 20           |           |
| Park Creek                             | 60                                              |                                               |              |           |
| Burnt Mountain Cabin                   | 40                                              |                                               |              |           |
| Coos Bay Shorelands SRMA               | 1,660                                           |                                               |              |           |
| Tioga Basin                            | 30                                              |                                               |              |           |
| McKinley Camp                          | 10                                              |                                               |              |           |
| East Fairview Boat Ramp                | 5                                               |                                               |              |           |
| Rock Prairie Boat Ramp                 | 0                                               |                                               |              |           |
| Gregory Point SRMA                     | 20                                              |                                               |              |           |
| North Fork Coquille ACEC               | 290                                             |                                               |              |           |
| Cherry Creek NRA                       |                                                 |                                               | 570          |           |
| Tioga Creek ACEC                       |                                                 |                                               | 40           |           |
| China Wall ACEC                        |                                                 |                                               | 240          |           |
| Upper Rock Creek ACEC                  | 460                                             |                                               |              |           |
| Powers Environmental Education<br>Area |                                                 |                                               | 70           |           |
| Bear Creek                             | 80                                              |                                               |              |           |
| New River                              | 250                                             |                                               | 630          |           |
| Sixes River                            | 160                                             |                                               |              |           |
| Cape Blanco Lighthouse                 | 50                                              |                                               |              |           |
| North Fork Hunter Creek ACEC           | 1,730                                           |                                               |              |           |
| Hunter Creek Bog ACEC                  | 570                                             |                                               |              |           |
| North Fork Chetco River ACEC           | 600                                             |                                               |              |           |
| Palmer Butte                           | 40                                              |                                               |              |           |
| Wilderness/Wilderness Study Areas      |                                                 |                                               | 10           |           |
| Progeny Test Sites/Seed Orchards       |                                                 |                                               | 370          |           |
| Snowy Plover Exclosures                |                                                 |                                               | 10           |           |
| Remainder of the District              | 316,675                                         |                                               |              |           |
| <b>Total Acres</b>                     | <b>326,600</b>                                  |                                               | <b>3,000</b> | <b>80</b> |

<sup>1</sup> Approximate acres



## Timber Resources

### Objectives

Provide a sustainable supply of timber and other forest products.

Manage developing stands on available lands to promote tree survival and growth and to achieve a balance between wood volume production, quality of wood, and timber value at harvest.

Manage timber stands to reduce the risk of stand loss from fires, animals, insects, and diseases.

Provide for salvage harvest of timber killed or damaged by events such as wildfire, windstorms, insects, or disease, consistent with management objectives for other resources.

### Land Use Allocations

Lands available for scheduled timber harvest are as follows:

| <u>Land Use Allocation</u>                                                                                            | <u>Approximate Acres</u> |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------|
| General Forest Management Areas (including visual resource management class II, rural interface, and TPCC restricted) | 55,300                   |
| Connectivity/Diversity Blocks                                                                                         | 6,600                    |

### Management Actions/Direction - All Land Use Allocations

Conform all management activities within the range of Port-Orford-cedar to the guidelines described in the *BLM Port-Orford-Cedar Management Guidelines* to mitigate damage caused by *Phytophthora lateralis*. Site-specific analysis for projects within the range of Port-Orford-cedar will consider possible effects on the species.

## Management Actions/Direction - Matrix (General Forest Management Area and Connectivity/Diversity Blocks)

### General

Declare an annual allowable sale quantity (ASQ) of 5.3 million cubic feet (32 million board feet).

The ASQ for the RMP is an estimate of annual average timber sale volume likely to be achieved from lands allocated to planned, sustainable harvest. This estimate, however, is surrounded by uncertainties. The actual timber sale levels may differ, as timber sale levels will be an effect of overall forest management rather than a target that drives that management. Harvest of this approximate volume of timber is considered sustainable over the long term based on the assumptions that the available land base remains fixed, and that funding is sufficient to make planned investments in timely reforestation, plantation maintenance, thinning, genetic selection, forest fertilization, timber sale planning, related forest resource protection, and monitoring.

The ASQ represents neither a minimum level that must be met nor a maximum level that cannot be exceeded. It is an approximation because of the difficulty associated with predicting actual timber sale levels over the next decade, given the complex nature of many of the management actions/direction. It represents BLM's best assessment of the average amount of timber likely to be awarded annually in the planning area over the life of the plan, following a start-up period. The actual sustainable timber sale level attributable to the land-use allocations and management direction of the RMP may deviate by as much as 20 percent from the identified ASQ. As inventory, watershed analysis, and site-specific planning proceed in conformance with that management direction, the knowledge gained will permit refinement of the ASQ. The separable component of the ASQ attributable to lands in key watersheds carries a higher level of uncertainty, due to the greater constraints of Aquatic Conservation Strategy objectives and the requirement to do watershed analysis before activities can take place.

During the first several years, it is unlikely that the ASQ will be offered for sale. The RMP



represents a new forest management strategy. It will take time to develop new timber sales that conform to the RMP.

Maintain a well-distributed pattern of early and mid-seral forest across the Matrix.

Retain snags within a timber harvest unit at levels sufficient to support species of cavity-nesting birds at 40 percent of potential population levels. Meet the 40 percent minimum throughout the Matrix with per acre requirements met on average areas no larger than 40 acres.

Apply silvicultural systems that are planned to produce, over time, forests with desired species composition, structural characteristics, and distribution of seral or age classes (see Appendix E).

Develop plans for the locations and specific designs of timber harvests and other silvicultural treatments within the framework of watershed analyses.

Select logging systems based on the suitability and economic efficiency of each system for the successful implementation of the silvicultural prescription, for protection of soil and water quality (See Appendix D), and for meeting other land use objectives.

Base silvicultural treatments and harvest designs on the functional characteristics of the ecosystem and on the characteristics of each forest stand and site. Treatments would be designed—as much as possible—to prevent the development of undesirable stand characteristics. The principles of integrated pest management and integrated vegetation management would be employed to avoid the need for direct treatments. Herbicides would be used only as a last resort.

Plan harvest of marketable hardwood stands in the same manner as conifer stands, unless the land is otherwise constrained from timber management. Volume from projected hardwood harvest would be in addition to the allowable sale quantity estimate. Where hardwood stands became established following previous harvest of conifers, plan to re-establish a conifer stand on the site.

Provide a renewable supply of large down logs well distributed across the Matrix landscape in a manner that meets the needs of species and provides for ecological functions. Models will be developed for groups of plant associations and stand types that can be used as a baseline for developing prescriptions.

A minimum of 120 linear feet of logs per acre, averaged over the cutting area and reflecting species mix of the unit, will be retained in the cutting area. All logs shall have bark intact, be at least 16 inches in diameter at the large end, and be at least 16 feet in length. Logs shall be distributed throughout the cutting area, and not piled or concentrated in a few areas. Decay class 1 and 2 logs will be credited toward the total. Where this management action/direction cannot be met with existing coarse woody debris, merchantable material will be used to make up the deficit.

In areas of partial harvest, apply the same basic management actions/direction, but they can be modified to reflect the timing of stand development cycles where partial harvest is practiced.

For unscheduled harvests, see the Riparian Reserves and Late-Successional Reserves sections.

Minimize disturbance of identified fragile sites (TPCC System Nonsuitable Woodlands and Suitable Woodlands).

## **Management Actions/Direction - General Forest Management Area**

Schedule regeneration harvests to assure that, over time, harvest occurs in stands at or above the age of volume growth culmination (i.e., culmination of mean annual increment). This refers to the age range which produces maximum average annual growth over the lifetime of a timber stand. In the planning area, culmination occurs between 60 and 80 years of age. To develop a desired age class distribution across the landscape and to provide for some commodity output, regeneration harvests will be scheduled in stands as young as 60 years.

Retain late-successional forest patches in landscape areas where little late-successional forest persists. This management action/direction will be applied in fifth field watersheds (20 to 200 square miles) in which federal forest lands are currently comprised of 15 percent or less late-successional forest. (The assessment of 15 percent will include all federal land allocations in a watershed.) Within such an area, protect all remaining late-successional forest stands. Protection of these stands could be modified in the future when other portions of a watershed have recovered to the point where they could replace the ecological roles of these stands.



Retain 6-8 green conifer trees per acre after regeneration harvest to provide a source of snag recruitment and a legacy for bridging past and future forests. Retained trees will be distributed in variable patterns (e.g., single trees, clumps and stringers) to contribute to stand diversity.

In addition to the green tree retention management action/direction, retain green trees for snag recruitment in harvest units where there is an identified, near-term (less than three decades) snag deficit. These trees do not count toward green-tree retention requirements.

## Management Actions/Direction - Connectivity/Diversity Blocks

Maintain 25-30 percent of each block in late-successional forest at any point in time. The percentage of habitat will include habitat in other allocations such as Riparian Reserves. Blocks may be comprised of contiguous or noncontiguous BLM-administered land. The size and arrangement of habitat within a block should provide effective habitat to the extent possible.

Manage available forest land on a 150-year area control rotation. Regeneration harvests will occur at a rate of approximately 1/15 of the available acres per decade. Because of the limited size of operable areas within any given block, up to three decades of harvest could be removed at any one time from a single block to make a viable harvest unit. Eventually each connectivity/diversity block will have 4 to 5 different age class represented.

Retain 12-18 green conifer trees per acre when an area is regeneration harvested. Distribute the retained trees in variable patterns (e.g., single trees, clumps and stringers) to contribute to stand diversity. The management goal for the retained trees and subsequent density management would be the recovery of old-growth conditions in approximately 100 to 120 years.



# Special Forest Products

## Objectives

Manage for the production and sale of special forest products (SFPs) when demand is present and where actions taken are consistent with primary objectives for the land use allocation.

Use the principles of ecosystem management to guide the management and harvest of special forest products.

## Land Use Allocations

No land use allocations are made specifically for special forest products.

## Management Actions/Direction - Riparian Reserves

Where catastrophic events result in degraded riparian conditions, allow fuelwood cutting if required to attain Aquatic Conservation Strategy objectives.

## Management Actions/Direction - Late-Successional Reserves

Permit fuelwood gathering only in existing cull decks, in areas where green trees are marked by silviculturists for thinning, in areas where blowdown is blocking roads, and in recently harvested timber sale units where down material will impede scheduled post-sale activities or pose an unacceptable risk of future large scale disturbance. In all cases, these activities will comply with management actions/direction for Late-Successional Reserves.

Evaluate whether special forest product harvest activities have adverse effects on Late-Successional Reserve objectives.

Prior to selling special forest products, ensure resource sustainability and protection of other resource values such as special status plants or animal species.

Where special forest product activities are extensive, evaluate whether they have significant effects on late-successional habitat. Restrictions may be appropriate in some cases.

## Management Actions/Direction - All Land Use Allocations

Allow harvest of Special Forest Products throughout the district, but apply the area restrictions as shown in Table 7 and the plant species or group restrictions as shown in Table 8.

Establish specific guidelines for the management of individual Special Forest Products using interdisciplinary review as needed. Management guidelines would be based on the ecological characteristics of the SFP species and the requirements of associated plant, animal, and fungal species. Guidelines will include provisions that minimize changes in site productivity. Monitoring of harvest activities and the effects of harvest would be part of SFP management. Feasibility to harvest newly identified SFP species would receive interdisciplinary review.

Provide opportunities for firewood cutting along roadsides where trees are obstructing sight distance, are a safety hazard, or are creating road maintenance problems.

In appropriate areas (e.g., the Matrix), manage hardwood stands originating from nonhuman causes for the continued production and sale of hardwood timber and products.

Promote burning of dry fuelwood by having copies of Oregon Department of Environmental Quality publications available for fuelwood purchasers.



Table 7. Area Restrictions for Special Forest Products

| Area                                                   | Limited Harvest <sup>1</sup> | No Harvest |
|--------------------------------------------------------|------------------------------|------------|
| Areas of Critical Environmental Concern                | X                            |            |
| Research Natural Areas                                 |                              | X          |
| Environmental education areas                          | X                            |            |
| Special habitats ( e.g. cliffs, talus slopes, meadows) | X                            |            |
| Developed recreation sites                             |                              | X          |
| Known cultural resource sites                          | X                            |            |
| Wetlands                                               |                              | X          |
| Fragile soil areas                                     | X                            |            |
| Special status fauna or flora sites                    |                              | X          |
| Connectivity/Diversity Blocks                          | X                            |            |
| Late Successional Reserves                             | X                            |            |
| Riparian Reserves                                      | X                            |            |
| Key Watersheds                                         | X                            |            |
| Progeny Test Sites/Seed Orchards                       | X                            |            |

<sup>1</sup> Harvesting in some sites/areas will be limited to seasons, amounts, species, etc.

Table 8. Plant Species or Groups Restrictions for Special Forest Products

| Plant Species or Group                              | Limited Harvest <sup>1</sup> | No Harvest |
|-----------------------------------------------------|------------------------------|------------|
| Lily family ( <i>Liliaceae</i> ) except beargrass   | X                            |            |
| Orchid family ( <i>Orchidaceae</i> )                |                              | X          |
| Iris family ( <i>Iridaceae</i> ) except common iris | X                            |            |
| Special status plant species                        |                              | X          |
| Truffles                                            | X                            |            |
| Mushrooms                                           | X                            |            |
| Lichens                                             | X                            |            |
| Mosses                                              | X                            |            |
| Ferns                                               | X                            |            |
| Conifer boughs                                      | X                            |            |
| Conifer wildings                                    | X                            |            |
| Port-Orford-Cedar boughs                            | X                            |            |
| Hardwood brush boughs                               | X                            |            |
| Hardwood wildings                                   | X                            |            |

<sup>1</sup> Harvesting will be restricted to certain seasons, amounts, sites/areas, or specific species.



# Energy and Minerals

## Objectives

Maintain exploration and development opportunities for leasable and locatable energy and mineral resources.

Provide opportunities for extraction of salable minerals by other government entities, private industry, individuals, and nonprofit organizations.

Continue to make mineral resources available on the reserved federal mineral estate.

## Land Use Allocations

The amount of BLM-administered lands with a potential for occurrence of energy and mineral resources and available for exploration and development is as follows:

| <u>Mineral Resource</u> | <u>Approximate Acres</u> |
|-------------------------|--------------------------|
| Leasable                | 328,000                  |
| Locatable               | 317,000                  |
| Salable                 | 314,300                  |

There are approximately 1,250 acres of private land with reserved federal mineral estate (also referred to as federal subsurface mineral estate).

## Management Actions/Direction - Riparian Reserves

Note: The following management actions/direction differ from the standards and guidelines in the SEIS ROD, since the standards and guidelines are not all implementable under current laws and regulations. The stronger standards and guidelines in the SEIS ROD (see Appendix B) will be adopted at such time as changes in current laws and/or regulations authorize their implementation.

For any proposed locatable mining operation in Riparian Reserves—other than notice level or casual use—require the following actions by the operator consistent with 43 CFR 3809:

- Prepare a Plan of Operations, including a reclamation plan and reclamation bond for all mining operations in Riparian Reserves. Such plans and bonds will address the costs of

removing facilities, equipment, and materials; recontouring of disturbed areas to an approved topography; isolating and neutralizing or removing toxic or potentially toxic materials; salvaging and replacing topsoil; and revegetating to meet Aquatic Conservation Strategy objectives.

- Locate structures, support facilities, and roads outside Riparian Reserves. If no alternative to siting facilities in Riparian Reserves exists, locate facilities in a way compatible with Aquatic Conservation Strategy objectives. Road construction will be kept to the minimum necessary for the approved mineral activity. Roads will be constructed and maintained to meet road management standards and to minimize damage to resources in Riparian Reserves. When a road is no longer required for mineral or land management activities, it will be reclaimed. In any case, access roads will be constructed consistent with 43 CFR 3809 and acceptable road construction standards and will minimize damage to resources in Riparian Reserves.
- Avoid locating solid and sanitary waste facilities in Riparian Reserves. If there is no alternative to locating mine waste (waste rock, spent ore, and tailings) facilities in Riparian Reserves—and if releases can be prevented and stability can be ensured—then:
  - Analyze the waste material using the best conventional sampling methods and analytic techniques to determine its chemical and physical stability characteristics.
  - Locate and design the waste facilities using best conventional techniques to ensure mass stability and prevent the release of acid or toxic materials. If the best conventional technology is not sufficient to prevent such releases and ensure stability over the long term, prohibit such facilities in Riparian Reserves.
  - Reclaim waste facilities after operations to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.
  - Monitor waste and waste facilities after operations to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.



- Require reclamation bonds adequate to ensure chemical and physical stability and to meet Aquatic Conservation Strategy objectives.
- Where an existing operator is in noncompliance at the notice level (i.e., causing unnecessary or undue degradation), require actions similar to those stated above to meet the intent of 43 CFR 3809.

For leasable minerals, prohibit surface occupancy for oil, gas, and geothermal exploration and development activities where leases do not exist. Where possible, adjust the stipulations in existing leases to eliminate impacts that retard or prevent the attainment of Aquatic Conservation Strategy objectives consistent with existing lease terms and stipulations.

Allow development of salable minerals (such as sand and gravel) within Riparian Reserves only if Aquatic Conservation Strategy objectives can be met.

Develop inspection and monitoring requirements and include such requirements in exploration and mining plans and in leases or permits consistent with existing laws and regulations. Evaluate the results of inspection and monitoring to determine if modification of plans, leases, and permits is needed to eliminate impacts that retard or prevent attainment of Aquatic Conservation Strategy objectives.

### Management Actions/Direction - Late-Successional Reserves

Assess the impacts of ongoing and proposed mining activities in Late-Successional Reserves.

Include stipulations in mineral leases and, when legally possible, require operational constraints for locatable mineral activities to minimize detrimental effects on late-successional habitat.

### Management Actions/Direction - All Land Use Allocations

See Tables 9, 10, and 11 and Maps 8 and 9 for restrictions on energy and mineral activities. See Appendix G for leasing stipulations and operating standards pertinent to locatable and salable minerals.

## Leasable Minerals

Use special stipulations for oil, gas, and geothermal leases to protect fragile areas or critical resource values (see Appendix G for a list of mineral restrictions by resource value). Special stipulations may include:

- Seasonal restrictions to protect resources such as critical wildlife habitat and to prevent excessive erosion.
- Controlled surface use stipulations to protect valuable resources in small areas.
- No surface occupancy stipulations to protect valuable resources scattered over a large area while still providing an opportunity for exploration and development.

Special stipulations may be waived by authorized BLM officials if the objective of a stipulation could be met in another way.

Provide opportunities for coal and geothermal exploration and development in areas with potential for occurrence. Coal activities are regulated under 43 CFR 3400, and geothermal activities are regulated under 43 CFR 3200.

## Locatable Minerals

Use general requirements in 43 CFR 3809 and site-specific guidelines to avoid unnecessary or undue degradation of resources on mining claims.

Require reclamation at the earliest feasible time for all surface-disturbing operations, whether conducted under a notice or approved plan of operations.

Allow activities exceeding casual use, but disturbing five acres or less, to proceed 15 days after a notice is filed with the Coos Bay BLM District.

Require an approved plan of operation before work can begin on projects disturbing more than five acres or special resource areas.

Require bonding of plans of operations to ensure mitigation measures are followed and reclamation of the disturbed lands is completed.

## Salable Minerals

Address quarry development, management, and reclamation needs through implementation planning.



**Table 9. Oil and Gas and Geothermal Lease Restrictions**

| Restriction                                      | Approximate Acres |
|--------------------------------------------------|-------------------|
| Closed - Nondiscretionary <sup>1</sup>           | 1,600             |
| Open - No Surface Occupancy <sup>2</sup>         | 170,300           |
| Open - With Standard Lease Terms                 | 101,400           |
| Open - With Additional Restrictions <sup>3</sup> | 56,300            |

<sup>1</sup> Congressionally designated areas, other agency withdrawals, Wilderness, and Wilderness Study Areas.

<sup>2</sup> Recreation sites and areas, R&PP and FLPMA leases, Special Areas, VRM Class I areas, Riparian Reserves, progeny test sites, regional forest nutritional study areas, threatened and endangered species habitat, great blue heron rookeries, and osprey nest sites.

<sup>3</sup> Special Recreation Management Areas, Suitable and Eligible (but not assessed) Recreational Rivers, Powersite Withdrawals, VRM Class II lands, fragile slopes, Federal Mineral Estate Only, Late-Successional Reserves, Special Status Species habitat, managed Rural Interface Areas, and seasonal wildlife restrictions.

**Table 10. Locatable Mineral Restrictions**

| Restriction                                      | Approximate Acres |
|--------------------------------------------------|-------------------|
| Closed - Nondiscretionary <sup>1</sup>           | 1,000             |
| Closed - Discretionary <sup>2</sup>              | 11,500            |
| Open - Standard Requirements                     | 99,500            |
| Open - With Additional Restrictions <sup>3</sup> | 217,600           |

<sup>1</sup> Congressionally designated areas and acquired lands.

<sup>2</sup> R&PP and FLPMA classifications or leases, Special Areas, Recreation Areas and Sites, Cherry Creek RNA, and BLM maintenance sites.

<sup>3</sup> Late-Successional Reserves, Riparian Reserves, powersite reserves, progeny test sites, areas closed to OHV, special areas, T&E plant and animal critical habitats, Regional Forest nutritional study installations, VRM class I and II, suitable and eligible (but not assessed) recreational river segments, seasonal wildlife restrictions, federal mineral estate only, and powersite classifications (placer operations only).



**Table 11. Salable Mineral Restrictions**

| Restriction                                      | Approximate Acres |
|--------------------------------------------------|-------------------|
| Closed - Nondiscretionary <sup>1</sup>           | 600               |
| Closed - Discretionary <sup>2</sup>              | 14,700            |
| Open - Standard Requirements                     | 84,600            |
| Open - With Additional Restrictions <sup>3</sup> | 229,700           |

<sup>1</sup> Congressionally designated areas.

<sup>2</sup> BLM maintenance sites, progeny test sites, Regional Forest nutritional study installations, R&PP and FLPMA leases, recreation areas and sites, VRM Class I lands, special areas, great blue heron rookeries, osprey nest sites, pending withdrawals, and proposed exchanges.

<sup>3</sup> Late-Successional Reserves, Riparian Reserves, federal mineral estate only, special recreation management areas, VRM Class II lands, critical habitat for threatened and endangered species, special status species habitat, and suitable and eligible (but not assessed) recreational rivers.

Emphasize long-term regional quarry use.

Develop new quarry sites in locations consistent with overall management objectives and guidelines of the proposed resource management plan.

Continue to use rock from existing quarries for construction and maintenance of timber sale access roads and other purposes.

Make salable minerals available for other government agencies if requested, and if the action is consistent with management direction for protection of other resources.

Issue sales for mineral materials that provide for reclamation of mined lands pursuant to 43 CFR 3604 or 3610 regulations.

Consider mineral materials permits on a case-by-case basis. Issue them at the discretion of the Area Manager.

## Reserved Federal Mineral Estate

Allow the reserved federal mineral estate to remain open for mineral development.

Allow development of locatable and salable minerals in accordance with restrictions determined by the surface owner/administrator.

Convey mineral interests owned by the United States where the surface is, or will be, in nonfederal ownership, to the existing or proposed owner of the surface estate only after a determination is made under Section 209(b) of FLPMA.



# **Range Resources**

## **Objectives**

Provide for livestock grazing in an environmentally sensitive manner consistent with other objectives and land use allocations.

Provide for rangeland improvement projects and management practices consistent with other objectives and land use allocations.

## **Land Use Allocations**

Where livestock grazing is authorized through a grazing lease, the area of use is defined by the grazing lease.

## **Management Actions/Direction - Riparian Reserves**

Through a planning and environmental analysis process appropriate to the action, adjust or eliminate grazing practices that retard or prevent attainment of Aquatic Conservation Strategy objectives.

Locate new livestock handling and/or management facilities outside Riparian Reserves. For existing livestock handling facilities inside Riparian Reserves, ensure that Aquatic Conservation Strategy objectives are met. Where these objectives cannot be met, require relocation or removal of such facilities.

Limit livestock trailing, bedding, watering, loading, and other handling efforts to those areas and times that will ensure Aquatic Conservation Strategy objectives are met.

## **Management Actions/Direction - Late-Successional Reserves**

In coordination with wildlife and fish biologists, implement range-related management activities that do not adversely affect late-successional habitat.

Through a planning and environmental analysis process appropriate to the action, adjust or eliminate grazing practices that retard or prevent attainment of Late-Successional Reserve objectives.

Evaluate effects of existing and proposed livestock management and handling facilities in Late-Successional Reserves to determine if reserve objectives are met. Where objectives cannot be met,

relocate livestock management and/or handling facilities.

## **Management Actions/Direction - All Land Use Allocations**

Apply the management actions/direction in the Special Status and SEIS Special Attention Species Habitat section.



# Land Tenure Adjustments

## Objectives

Make land tenure adjustments to benefit a variety of uses and values. Emphasize opportunities that conserve biological diversity or enhance timber management opportunities. As a matter of practice, O&C forest lands allocated to timber management would only be exchanged for lands to be managed for multiple-use purposes.

Meet the following objectives for the three land tenure adjustment zones:

- Zone 1:** Generally, retain these lands under BLM administration.
- Zone 2:** "Block up" areas in Zone 2 with significant resource values and exchange other lands in Zone 2 to "block up" areas in Zones 1 and 2 with significant resource values.
- Zone 3:** Retain lands with unique resource values; dispose of other lands in this zone using appropriate disposal mechanisms.

Make BLM-administered lands in Zones 1, 2, and 3 available for a variety of uses as authorized by Section 302 of the Federal Land Policy and Management Act, the Recreation and Public Purposes Act, and special recreation permits.

Manage newly-acquired lands for the purpose for which they are acquired or consistent with the management objectives for adjacent BLM-administered lands. If lands with unique or fragile resource values are acquired, protect those values until the next plan revision.

Eliminate unauthorized use of BLM-administered land.

## Land Use Allocations

| <u>Zone</u> | <u>Approximate Acres</u> |
|-------------|--------------------------|
| Zone 1      | 4,600                    |
| Zone 2      | 324,000                  |
| Zone 3      | 1,100                    |

See Map 10 for location of land tenure zones. See Appendix H for legal descriptions of Zone 3 lands.

## Management Actions/Direction - Riparian Reserves

Use land acquisition, exchange, and conservation easements to meet Aquatic Conservation Strategy objectives and facilitate restoration of fish stocks and other species at risk of extinction.

## Management Actions/Direction - Late-Successional Reserves

Consider land exchanges when they will provide benefits equal to or better than current conditions.

Consider land exchanges especially to improve area, distribution, and quality (e.g., connectivity, shape, and contribution to biodiversity) of Late-Successional Reserves and where public and private lands are intermingled.

## Management Actions/Direction - All Land Use Allocations

Use the land tenure adjustment criteria shown in Appendix I when analyzing site-specific proposals to acquire or dispose of land.

Use the following three-zone concept to guide selection of lands for exchange, sale, transfer, or acquisition:

- **Zone 1:** Includes lands and other areas identified as having high public resource values. The natural resource values may require protection by federal law, executive order or policy. These lands may have other values or natural systems which merit long-term public ownership. They do not meet the criteria for sale under FLPMA section 203 (a) and will generally be retained in public ownership.

The primary mode of land acquisition in zone 1 will be through exchange of BLM-administered lands in zones 2 and 3. Purchases and donations will be pursued if exchange is not feasible. All fee acquisitions will be with willing sellers.

- **Zone 2:** Includes lands that meet the criteria for exchange because they form discontinuous ownership patterns, are relatively inefficient to



manage, and may not be accessible to the general public. These BLM-administered lands may be blocked up in exchanges for other lands in zones 1 or 2, transferred to other public agencies, or given some form of cooperative management. These lands will not be sold under FLPMA section 203 (a) unless the RMP is amended.

- **Zone 3:** Includes lands that are scattered and isolated with no known unique resource values. Zone 3 lands will be available for use in exchanges for inholdings in zone 1 (high priority) or zone 2 (moderate priority). They are also potentially suitable for disposal through sale under FLPMA section 203 (a). This will occur only if important recreation, wildlife, watershed, threatened or endangered species habitat, and/or cultural values are not identified during disposal clearance reviews and no viable exchange proposals for them can be identified. Zone 3 lands will also be available for conveyance to another federal, state or local agency, as needed to accommodate community expansion and other public purposes. Transfer to another federal agency to fulfill a specific management objective will also be permitted in zone 3. Application of these criteria may result in retention of some zone 3 lands.

Consider the effect of land tenure adjustments on the mineral estate. If the lands are not known to have mineral potential, or in an exchange if the mineral potential is deemed equal, the mineral estate will normally be transferred simultaneously with the surface estate.

Consider conveying the subsurface mineral interest owned by the United States to the existing or proposed owner of the surface estate consistent with FLPMA Section 209 (b).

Make exchanges to enhance public resource values and/or improve land patterns and management capabilities of both private and BLM-administered land within the planning area by consolidating ownership and reducing the potential for land use conflict.

Consult with county governments prior to any exchange or sale involving O&C or CBWR lands.

Minimize impact on local tax base by emphasizing exchanges rather than fee purchase.

Realign the Coos Bay/Medford District boundaries and sustained yield unit boundaries to

administratively transfer jurisdiction of the land in the O'Brien-Takilma area from the Coos Bay District to the Medford District.

Realign the Coos Bay/Roseburg District boundaries and sustained yield unit boundaries to administratively transfer jurisdiction of the BLM-administered land in T. 271/2 S., R. 8 W., W.M., from the Coos Bay District to the Roseburg District.

Exchange of O&C and CBWR lands would be made primarily to acquire lands that would enhance timber management opportunities. Exchanges of Public Domain lands would be made to benefit one or more of the resources managed, including nontimber values. Sale of O&C and CBWR lands other than available commercial forest lands and Public Domain lands would be made to dispose of lands that meet the criteria of FLPMA Section 203 (a).

BLM-administered lands on the North Spit of Coos Bay within Coos County Comprehensive Plan zoning districts 3E-WD, 4CS, and 6WD could be offered for exchange, sale, or lease to accommodate local economic expansion and industrial development. BLM could acquire lands in zoning district 2CS to benefit recreation and wildlife, in zoning district 5A-NS to benefit wildlife values, or other lands to benefit other resource values.

Sell BLM-administered lands under the authority of FLPMA section 203 (a), which requires that at least one of the following conditions exists before land is offered for sale:

- The tract, because of its location or other characteristics, is difficult or uneconomical to manage as part of BLM-administered lands and is not suitable for management by another federal department or agency.
- The tract was acquired for a specific purpose and is no longer required for any federal purpose.
- Disposal of the tract would serve important BLM objectives. These include, but are not limited to:
  - Expansion of communities and economic development, which cannot be achieved prudently or feasibly on land other than BLM-administered lands and which outweigh other public objectives.
  - Values including, but not limited to, recreation and scenic values, which would



be served by maintaining such tract in federal ownership.

- Acquire land through exchange if at least one of the following objectives is met:
  - Access to public lands and resources would be improved.
  - Important public values and uses would be maintained or enhanced.
  - Local social and economic values would be maintained or enhanced.
  - Other aspects of the approved RMP would be implemented.



# Rights-of-Way

## Objectives

Continue to make BLM-administered lands available for needed rights-of-way where consistent with local comprehensive plans, Oregon statewide planning goals and rules, and the exclusion and avoidance areas identified in this PRMP.

Ensure that all rights-of-way for hydroelectric development are consistent with the Northwest Power Planning Council guidance, which recommends prohibiting future hydroelectric development on certain rivers and streams with significant fisheries and wildlife values.

## Land Use Allocations

Allocation of lands to existing rights-of-way would continue.

| <u>Rights-of-Way</u> | <u>Miles</u> | <u>Number</u> |
|----------------------|--------------|---------------|
|----------------------|--------------|---------------|

|                                 |    |  |
|---------------------------------|----|--|
| High voltage transmission lines | 16 |  |
|---------------------------------|----|--|

|                     |  |   |
|---------------------|--|---|
| Communication sites |  | 9 |
|---------------------|--|---|

Locations are shown on Map 11.

The Western Regional Corridor Study did not identify any potential new rights-of-way within the district.

Subject to valid existing rights and with the exception of buried lines in rights-of-way of existing roads, exclude rights-of-way in the following areas:

| <u>Exclusion Area</u>  | <u>Approximate Acres</u> |
|------------------------|--------------------------|
| Research Natural Areas | 570                      |
| Wilderness Study Areas | 8                        |
| Wilderness Areas       | 8                        |
| VRM Class I Areas      | 0                        |

VRM Class I areas are included in the above acreages.

With the exception of buried lines in rights-of-way of existing roads, avoid locating rights-of-way in the following areas:

| <u>Avoidance Area</u>                                                   | <u>Approximate Acres</u> |
|-------------------------------------------------------------------------|--------------------------|
| Recreation Sites (existing and proposed)                                | 2,700                    |
| Areas of Critical Environmental Concern (except Research Natural Areas) | 1,400                    |
| Scenic and Recreational Rivers (suitable, designated)                   | 0                        |
| Sensitive Species Habitat                                               | 100                      |
| VRM Class II Areas                                                      | 0                        |
| Late-Successional Reserves                                              | 142,500                  |

Future rights-of-way may be granted in avoidance areas when no feasible alternative route or designated right-of-way corridor is available.

## Management Actions/Direction - Riparian Reserves

Issue rights-of-way to avoid adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives. Where legally possible, adjust existing rights-of-way to eliminate adverse effects that retard or prevent the attainment of Aquatic Conservation Strategy objectives. If adjustments are not effective and where legally possible, eliminate the activity. Priority for modifying existing rights-of-way will be based on the actual or potential impact and the ecological value of the riparian resources affected.

For proposed hydroelectric projects under the jurisdiction of the Federal Energy Regulatory Commission (the Commission), provide timely, written comments regarding maintenance of instream flows and habitat conditions and maintenance/restoration of riparian resources and stream channel integrity. Request the Commission to locate proposed support facilities outside of Riparian Reserves. For existing support facilities inside Riparian Reserves that are essential to proper management, provide recommendations to the Commission that ensure Aquatic Conservation Strategy objectives are met. Where these objectives cannot be met, provide recommendations to the Commission that such support facilities should be relocated. Existing support facilities that must be located in the Riparian Reserves should be located, operated, and maintained with an emphasis to



## **Resource Management Plan**

eliminate adverse effects that retard or prevent attainment of Aquatic Conservation Strategy objectives.

For other hydroelectric and surface water development proposals in Tier 1 Key Watersheds, require instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies. For other hydroelectric and surface water development proposals in all other watersheds, give priority emphasis to instream flows and habitat conditions that maintain or restore riparian resources, favorable channel conditions, and fish passage. Coordinate this process with the appropriate state agencies.

## **Management Actions/Direction - Late-Successional Reserves**

Retain and maintain existing developments (such as utility corridors and electronic sites) consistent with other management actions/direction for Late-Successional Reserves.

Neither construct nor authorize new facilities that may adversely affect Late-Successional Reserves.

Review on a case-by-case basis new development proposals. They may be approved when adverse effects can be minimized and mitigated.

Locate new developments to avoid degradation of habitat and adverse effects on identified late-successional species.

Remove hazard trees along utility rights-of-way and in other developed areas.

## **Management Actions/Direction - Other Land Use Allocations**

Encourage location of major new rights-of-way projects in existing utility/transportation routes and other previously designated corridors.

Encourage applicants to consult the Western Regional Corridor Study in planning route locations.

Consider new locations for rights-of-way projects on a case-by-case basis. Applications may be approved where the applicant can demonstrate that use of an existing route or corridor would not be technically or economically feasible; and the proposed project would otherwise be consistent with

this RMP and would minimize damage to the environment.

Allow expansion of communications facilities on existing communication sites.

Consider new communication sites on a case-by-case basis. Applications may be approved where the applicant can demonstrate that use of an existing, developed communication site would not be technically feasible; and the proposed facility would otherwise be consistent with this RMP and would minimize damage to the environment.



# Access

## Objectives

Acquire access to public lands that assist various programs to meet management objectives.

## Land Use Allocations

None

## Management Actions/Direction

Acquire access by obtaining easements, entering into new reciprocal right-of-way agreements, or amending existing reciprocal right-of-way agreements. Condemnation for access will be pursued when necessary.

Acquire perpetual exclusive easements whenever possible to provide for public access and BLM control. Acquire temporary easements or nonexclusive easements, which do not provide for public access, consistent with management objectives and where no public access is needed.

Continue to obtain access across lands of private companies or individuals who are a party (permittee) to existing reciprocal rights-of-way agreements through appropriate agreements. Whenever a willing permittee is identified and it is determined there is a need for public access, negotiations could be started to provide for the acquisition of public access rights.

Emphasize acquisition for public access on major travel routes.



## Withdrawals

### Objectives

Protect lands with important resource values and/or significant levels of investment by withdrawing them from the operation of public land and mineral laws. Withdrawal is necessary to avoid irreparable damage that may be caused by nondiscretionary activities.

### Land Use Allocations

Recommendations to maintain or revoke existing land withdrawals are shown in Appendix J. See Appendix K for a listing of proposed withdrawals.

A summary of BLM-proposed withdrawals is as follows:

|                                                    | Approximate<br><u>Acres</u> |
|----------------------------------------------------|-----------------------------|
| Seed Orchards and Progeny<br>Test Sites            | 255                         |
| Quarry and Stockpile Sites                         | 50                          |
| Dean Creek Elk Viewing Area                        | 1,040                       |
| Cape Blanco                                        | 50                          |
| Pacific Ocean Coastline                            | 800                         |
| Recreation Sites/Areas<br>(2 Existing, 6 Proposed) | 330                         |
| Special Areas (8 Proposed)                         | 7,370                       |

### Management Actions/Direction

See Management of Newly Acquired Lands (toward the end of this section).

Complete the review of existing withdrawals to determine whether continuation of the withdrawal is consistent with the statutory objectives of the programs for which the lands were dedicated and with other important programs.

Terminate unnecessary or duplicative withdrawals and continue those that still meet the intent of the withdrawal. See Appendix J.

Initiate action on the BLM-proposed withdrawals listed under land use allocations. This will involve

recommendations to, and approval by, the Secretary of the Interior.

Evaluate future withdrawal proposals for compliance with program objectives and federal law, and recommend appropriate action to the Secretary of the Interior.

Limit withdrawals to the minimum area needed and restrict only those activities that would be detrimental to the purposes of the withdrawal.

Prior to any management activity on withdrawn land returned to BLM by termination or revocation, conduct required resource surveys and complete all required planning and environmental assessment work.



# Roads

## Objectives

Develop and maintain a transportation system that serves the needs of users in an environmentally sound manner. Arterial and major collector roads will form the backbone of the transportation system in the planning area.

Correct problems associated with high road density by emphasizing the reduction of minor collector and local road densities where those problems exist.

Manage roads to meet the needs identified under other resource programs (e.g., seasonal road closures for wildlife). Road management is mentioned or implied primarily under Aquatic Conservation Strategy Objectives, Riparian Reserves, Late-Successional Reserves, Water Quality and Soils, Wildlife, Fish Habitat, Special Status and SEIS Special Attention Species Habitat, Timber Resources, and Recreation.

## Land Use Allocations

In July 1994, there were approximately 1,810 miles of roads on BLM-administered land in the district.

## Management Actions/Direction - Riparian Reserves

Cooperate with federal, state, and county agencies and work with parties with road use agreements to achieve consistency in road design, operation, and maintenance necessary to attain Aquatic Conservation Strategy objectives.

For each existing or planned road, meet Aquatic Conservation Strategy objectives by:

- Completing watershed analyses, including appropriate geotechnical analyses (i.e., examining soil and rock conditions in riparian and stream crossings), prior to construction of new roads or landings in Riparian Reserves.
- Minimizing road and landing locations in Riparian Reserves.
- Preparing road design criteria, elements, and standards that govern construction and reconstruction.

- Preparing operation and maintenance criteria that govern road operation, maintenance, and management.
- Minimizing disruption of natural hydrologic flow paths, including diversion of streamflow and interception of surface and subsurface flow.
- Restricting sidecasting as necessary to prevent the introduction of sediment to streams.
- Avoiding wetlands entirely when constructing new roads.

Determine the influence of each road on the Aquatic Conservation Strategy objectives through watershed analysis. Meet Aquatic Conservation Strategy objectives by:

- Reconstructing roads and associated drainage features that pose a substantial risk.
- Prioritizing reconstruction based on current and potential impact to riparian resources and the ecological value of the riparian resources affected.
- Closing and stabilizing (or obliterating and stabilizing) roads based on the ongoing and potential effects to Aquatic Conservation Strategy objectives and considering short-term and long-term transportation needs.

Design and construct new culverts, bridges, and other stream crossings and improve existing culverts, bridges, and other stream crossings determined to pose a substantial risk to riparian conditions. New structures and improvements will be designed to accommodate at least the 100-year flood, including associated bedload and debris. Priority for upgrading will be based on the potential impact and the ecological value of the riparian resources affected. Crossings will be constructed and maintained to prevent diversion of streamflow out of the channel and down the road in the event of crossing failure.

Minimize sediment delivery to streams from roads. Outsloping of the roadway surface is preferred, except in cases where outsloping would increase sediment delivery to streams or where outsloping is infeasible or unsafe. Route road drainage away from potentially unstable channels, fills, and hillslopes.

Provide and maintain fish passage at all road crossings of existing and potential fish-bearing streams (e.g., streams which can be made available



## **Resource Management Plan**

to anadromous fish by removing obstacles to passage).

Develop and implement a Road Management Plan or a Transportation Management Plan that meets the Aquatic Conservation Strategy objectives. As a minimum, this plan will include provisions for the following activities:

- Inspections and maintenance during storm events.
- Inspections and maintenance after storm events.
- Road operation and maintenance giving high priority to identifying and correcting road drainage problems that contribute to degrading riparian resources.
- Traffic regulation during wet periods to prevent damage to riparian resources.
- Establishing the purpose of each road by developing the road management objective.

## **Management Actions/Direction - Key Watersheds**

Reduce existing road mileage within Key Watersheds. If funding is insufficient to implement reductions, do not construct, or authorize through discretionary permits, a net increase in road mileage in Key Watersheds.

## **Management Actions/Direction - Late Successional Reserves**

Construct roads in Late Successional Reserves if the potential benefits of silviculture, salvage, and other activities exceed the costs of habitat impairment. If new roads are necessary to implement a practice that is otherwise in accordance with these guidelines, they will be kept to a minimum, routed through unsuitable habitat where possible, and designed to minimize adverse impacts. Alternative access—such as aerial logging—should be considered to provide access for activities in reserves.

Remove trees along rights-of-way if they are a hazard to public safety. Consider leaving material onsite if available coarse woody debris is inadequate. Consider topping of trees as an alternative to felling.

## **Management Actions/Direction - All Land Use Allocations**

Prepare a district wide road management plan after approval of the resource management plan. The management plan will specifically address recreation use, road densities, road closures, wildlife protection, water quality, Port-Orford-cedar management, timber management, construction and maintenance standards, fire suppression, and coordination with adjacent landowners. Address road management planning on a watershed basis consistent with Late-Successional Reserves, Riparian Reserves, and other major allocations. Specific road closures would be determined using standard analysis, public involvement, and notification procedures.

Determine standards for new road construction during the project planning process. Standards will be the minimum necessary to meet resource and allocation objectives (e.g., recreation site, timber sale, and key watershed) while having minimal impacts on the environment.

Minimize new road construction in areas with fragile soils to reduce impacts to soils, water quality, and fisheries. Stabilize existing roads where they contribute to significant adverse effects on these resources.

Conduct a geotechnical review on road design in areas of sensitive soils such as the serpentine and schists soils of Curry County. An inventory of existing unstable areas will be planned to stabilize those areas that pose sedimentation concerns or adversely affect other resources.

Specifically address—in the road management plan, watershed analysis, or in environmental assessment geotechnical review—options for stabilizing roads in sensitive soils and unstable areas.

Locate, design, construct, and maintain roads to standards that meet management objectives in accordance with the district road management plan.

Follow Best Management Practices (see Appendix D) for water quality and soil productivity to mitigate adverse effects on soils, water quality, fish, and riparian habitat during road construction and maintenance.

Reduce road density by closing minor collector and local roads in areas or watersheds where water quality degradation, big game harassment, or other road related resource problems have been identified.



Acquire water rights for road management purposes.

Avoid road construction in special areas and special habitats as an alternative to other geotechnical repairs.

Manage non-through roads classified as local and located within rural interface areas and within 0.25 miles of existing dwellings to limit unauthorized public use activity that could contribute to public safety hazards, increased fire risk, and vandalism to private property. Gates and other types of traffic barriers (such as guardrails, berms, ditches, and log barricades) would be used as appropriate.

Reduce the further spread of blackstain fungus through proper timing of roadside brushing.

Consider the use of firewood sales as an option for the removal of roadside trees where they are obstructing sight distance.



# Noxious Weeds

## Objectives

Contain and/or reduce noxious weed infestations on BLM-administered land using an integrated pest management approach and avoid introducing or spreading noxious weed infestations in any areas. Some noxious weeds expected to be subject to control are:

| <u>Common Name</u> | <u>Scientific Name</u>        |
|--------------------|-------------------------------|
| Purple loosestrife | <i>Lythrum salicaria</i>      |
| Gorse              | <i>Ulex europaeus</i>         |
| Scotch broom       | <i>Cytisus scoparius</i>      |
| French broom       | <i>Genista monosperma</i>     |
| Yellow starthistle | <i>Centaurea solstitialis</i> |
| Tansy ragwort      | <i>Senecio jacobaea</i>       |
| Maltgrass          | <i>Nardus stricta</i>         |
| Thistles           | <i>Cirsium</i> spp.           |

Apply integrated pest management methods (e.g., chemical, mechanical, manual, and/or biological) in accordance with BLM's multi-state environmental impact statement, *Northwest Area Noxious Weed Control Program*, as supplemented, and the related ROD.

## Land Use Allocations

No allocations are made for noxious weeds in the planning process.

## Management Actions/Direction - Late-Successional Reserves

Evaluate impacts of non-native plants (weeds) growing in Late-Successional Reserves.

Develop plans and recommendations for eliminating or controlling non-native plants (weeds) that adversely affect Late-Successional Reserve objectives. Include an analysis of effects of implementing such programs on other species or habitats within reserves.

## Management Actions/Direction - All Land Use Allocations

Continue to survey BLM-administered land for noxious weed infestations, report infestations to the Oregon Department of Agriculture, and coordinate with them to reduce infestations.

Use control methods that do not retard or prevent attainment of Aquatic Conservation Strategy Objectives.



# Hazardous Materials

## Objectives

Minimize the use of hazardous materials and eliminate known hazardous waste on BLM-administered lands.

## Land Use Allocations

No allocations are made for hazardous material sites in the planning process.

## Management Actions/Direction

Minimize the use of hazardous materials and eliminate known hazardous waste on BLM-administered lands.

Identify, investigate, and arrange for removal of hazardous substances on BLM-administered land in accordance with the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Emergency response will be as specified in the District Hazardous Materials Contingency Plan. The response will include cleanup, proper notifications, criminal investigations, risk assessment, and other actions consistent with the Act and the nature of the emergency.

Store, treat, and dispose of hazardous materials and wastes in accordance with the Resource Conservation and Recovery Act (RCRA) and other appropriate regulations.

Use the Emergency Planning and Community Right-To-Know Act to coordinate emergency planning with other federal, state, and local jurisdictions concerning hazardous materials, emergency notifications, and required reporting of hazardous materials inventories and activities.

Ensure acquisitions are unencumbered by the existence of hazardous materials and features such as underground storage tanks following appropriate state and federal regulations.

Until hazardous materials on BLM-administered land are removed, protect employees, the public—and where possible the environment—from exposure to these materials.

Provide information and education to the public regarding the dangers of exposure to hazardous

materials and the need to dispose of hazardous materials properly.

Investigate illegal hazardous materials activity on public lands, determine responsible parties, pursue recovery costs, and—where appropriate—prosecution under the laws pertaining to such activity.



## Fire/Fuels Management

### Objectives

Provide appropriate fire suppression responses to wildfires that will help meet resource management objectives and minimize the risk of large-scale, high intensity wildfires.

Use prescribed fire to meet resource management objectives. This will include—but not be limited to—fuels management for wildfire hazard reduction, restoration of desired vegetation conditions, management of habitat, management of fire dependent/adapted species, and silvicultural treatments.

Adhere to smoke management/air quality standards of the Clean Air Act and State Implementation Plan for prescribed burning.

### Land Use Allocations

None specifically for fire/fuels management.

### Management Actions/Direction - General

Apply the management actions/direction in the Special Status and SEIS Special Attention Species section.

Address fire/fuels management for all land use allocations as part of watershed analysis and project planning. This will include determinations of the role of fire and the risk of large-scale, high intensity wildfires at the landscape level.

Coordinate fire management activities in rural interface areas with local governments, agencies, and landowners. During watershed analysis, identify additional factors that may affect hazard reduction goals. Minimize the impacts of wildfire suppression actions.

### Management Actions/Direction - Riparian Reserves

Design fuel treatment and fire suppression strategies, practices, and activities to meet Aquatic Conservation Strategy objectives, and to minimize disturbance of riparian ground cover and vegetation. Strategies will recognize the role of fire in ecosystem

function and identify those instances where fire suppression or fuel management activities could be damaging to long-term ecosystem function.

Locate incident bases, camps, helibases, staging areas, helispots, and other centers for incident activities outside of Riparian Reserves. If the only suitable location for such activities is within the Riparian Reserve, an exemption may be granted following a review and recommendation by a resource advisor. The advisor will prescribe the location, use conditions, and rehabilitation requirements. Utilize an interdisciplinary team to predetermine suitable incident base and helibase locations.

Minimize delivery of chemical retardant, foam, or other additives to surface waters. An exception may be warranted in situations where over-riding immediate safety imperatives exist, or—following a review and recommendation by a resource advisor—when an escape would cause more long-term damage.

Design prescribed burn projects and prescriptions to contribute to attainment of Aquatic Conservation Strategy objectives.

Immediately establish an emergency team to develop a rehabilitation treatment plan needed to attain Aquatic Conservation Strategy objectives whenever Riparian Reserves are significantly damaged by a wildfire or a prescribed fire burning outside prescribed parameters.

Until watershed analysis is completed for a watershed, suppress wildfire to avoid loss of habitat and to maintain future management options.

Consider allowing some natural fires to burn under prescribed conditions. This decision will be based on additional analysis and planning.

Consider rapidly extinguishing smoldering coarse woody debris and duff.

Locate and manage water-drafting sites (e.g., sites where water is pumped to control or suppress fires) to minimize adverse effects on riparian habitat and water quality as consistent with Aquatic Conservation Strategy objectives.

### Management Actions/Direction - Late-Successional Reserves

Emphasize maintaining late-successional habitat in wildfire suppression plans.



Use minimum impact suppression methods for fuels management in accordance with guidelines for reducing risks of large-scale disturbances.

During fire suppression activities, consult with an interdisciplinary team to assure that habitat damage is minimized.

Until a fire management plan is completed for a Late-Successional Reserve or group of reserves, suppress wildfire to avoid loss of habitat and to maintain future management options. Then, some natural fires may be allowed to burn under prescribed conditions.

Prepare a specific fire management plan prior to any habitat manipulation activities in Late-Successional Reserves. Specify how hazard reduction and other prescribed fire applications meet the objectives of the Late-Successional Reserve. Until the plan is approved, proposed activities will be subject to review by the Regional Ecosystem Office.

Apply prescribed fire in a manner that retains the amount of coarse woody debris determined through watershed analysis.

Consider allowing some natural fires to burn under prescribed conditions. This decision will be based on additional analysis and planning.

Consider rapidly extinguishing smoldering coarse woody debris and duff.

## Management Actions/Direction - Matrix

Plan and implement prescribed fire treatments to minimize:

- Intensive burning, unless appropriate for certain specific habitats, communities, or stand conditions.
- Consumption of litter and coarse woody debris.
- Disturbance of soil and litter that may occur as a result of heavy equipment operation.
- Frequency of treatments.

## Management Actions/Direction - All Land Use Allocations

### Wildfire Suppression

Minimize the direct negative impacts of wildfire suppression on ecosystem management objectives.

Respond to all wildfires by taking appropriate suppression responses. In most cases, responses will consist of aggressive initial attack to extinguish fires at the smallest size possible.

For wildfires that escape initial attack, perform a Wildfire Situation Analysis to develop a suppression strategy to evaluate the damage induced by suppression activities compared to expected wildfire damage. Suppression tactics will consider:

- Public and firefighting personnel safety.
- Protection of specific attributes of each land use allocation.
- Coordination of wildfire suppression activities to avoid causing adverse impacts on federal and nonfederal lands.
- Appropriate use of suppression tools (such as aircraft, dozers, pumps, and other mechanized equipment) and clear definitions of any restrictions relating to their use.
- Potential adverse effects on meeting ecosystem management objectives.
- Protection of structural components such as snags, duff, and coarse woody debris to the extent possible.

### Fuels Management (Including Hazard Reduction) Using Prescribed Fire

Modify fuel profiles to lower the potential of fire ignition and rate of spread; protect and support land use allocation objectives by lowering the risk of high intensity, stand-replacing wildfires; and, adhere to smoke management and air quality standards.

Reduce hazards through methods such as prescribed burning; mechanical or manual manipulation of forest vegetation and debris; removal of forest vegetation and debris; and combinations of these methods. Hazard reduction plans will be



developed through an interdisciplinary team approach and will consider the following:

- Safety of fire fighting personnel.
- Identification of levels of coarse woody debris and snags of adequate size and in sufficient quantities to meet habitat requirements of species of concern.
- Developing a fuel profile that supports land allocation objectives.
- Reducing the risk of wildfire in a cost-efficient manner.
- Interagency cooperation to assure cost-effective fuel hazard reduction across the landscape.
- Adherence to smoke management and air quality standards.
- Consistency with objectives for land use allocations.
- Maintenance or restoration of ecosystem processes or structure.
- The natural role of fire in specific landscapes, current ecosystem needs, and wildfire hazard analysis included in the fire management plan.

## Prescribed Fire Use for Ecosystem Maintenance and Restoration

The use of prescribed fire will be based on the risk of high intensity wildfire and the associated cost and environmental impacts of using prescribed underburning to meet protection, restoration, and maintenance of critical stands that are currently susceptible to large-scale catastrophic wildfire.

Underburning will be re-introduced across large areas over a period of time to create a mosaic of stand conditions. Treatments should be site-specific because some species with limited distributions are fire intolerant. The use of prescribed burning will be based on an interdisciplinary evaluation. Accordingly, funding authority must reflect the range of objectives identified for using fire under ecosystem management.

Consider using prescribed fire to manage seral stage diversity through the development of fire-resistant stand mosaics by timing the application of fire.

## Fuels Management for Hazard Reduction

Modify fuel profiles to lower the potential of fire ignition and rate of spread; protect and support land allocation objectives by lowering the risk of high-intensity, stand-replacing wildfires; and, adhere to smoke management and air quality standards.

Reduce hazards through methods such as prescribed burning; mechanical or manual manipulation of forest vegetation and debris; removal of forest vegetation and debris; and combinations of these methods. Hazard reduction plans will be developed through an interdisciplinary team approach and will consider the following:

- Providing for the safety of firefighting personnel.
- Identification of levels of coarse woody debris and snags of adequate size and in sufficient quantities to meet habitat requirements of species of concern.
- Developing a fuel profile that supports land allocation objectives while seeking a balance between reducing the risk of wildfire and the cost efficiency, consistent with meeting land allocation objectives.



# Coordination and Consultation

The implementation of this RMP and the overriding SEIS ROD calls for a high level of coordination and cooperation among agencies. A formal procedure for interagency coordination has been created by a Memorandum of Understanding for Ecosystem Management that has been entered into by the White House Office on Environmental Policy, the Department of the Interior, the Department of Agriculture, the Department of Commerce, and the Environmental Protection Agency. The memorandum of understanding (MOU) created several interagency groups, including the Interagency Steering Committee, Regional Interagency Executive Committee, and Regional Ecosystem Office. A detailed description of these groups is included in the SEIS ROD, Attachment A, Section E, Implementation.

Consultation under the Endangered Species Act will emphasize an integrated ecosystem approach. This will include involving the U.S. Fish and Wildlife Service and the National Marine Fisheries Service in all relevant implementation planning to ensure their views are known. Actions proposed to implement this RMP will undergo consultation, either formal or informal, as appropriate. Consultation for the northern spotted owl on activities that are consistent with the standards and guidelines of the SEIS ROD and that would not result in "take" of a listed species is expected to be informal. If "take" would result, incidental "take" statements will be provided through formal consultation.

Concurrent coordination with the Environmental Protection Agency (EPA) and Oregon Department of Environmental Quality (DEQ) on water quality standards and beneficial use requirements of the Clean Water Act will minimize project impacts. Similar coordination will occur with the EPA, DEQ, and U.S. Forest Service to minimize impacts from prescribed burning emissions.

## Use of the Completed Plan

Many management activities described in this RMP will be accomplished through contracts and permits with specific performance standards developed. The standards require the contractor or permittee to comply with applicable laws, regulations, policies,

and plans. Selection of performance standards is governed by the scope of the action to be undertaken and the physical characteristics of the specific site. The standards, which include design features and mitigating measures, must be followed in carrying out an action.

Site-specific planning by interdisciplinary teams (IDTs) will precede most on-the-ground management activities. IDTs are comprised of relevant resource management disciplines. The IDT process includes field examination of resources, selection of alternative management actions, analysis of alternatives, and documentation to meet National Environmental Policy Act requirements. Adjacent land uses will be considered during site-specific land management planning.

Potential minor changes, refinements or clarifications in the plan may take the form of maintenance actions. Maintenance actions respond to minor data changes and incorporation of activity plans. Such maintenance is limited to further refining or documenting a previously approved decision incorporated in the plan. Plan maintenance will not result in expansion of the scope of resource uses or restrictions nor change the terms, conditions and decisions of the approved RMP. Maintenance actions are not considered a plan amendment and do not require the formal public involvement and interagency coordination process undertaken for plan amendments. Important plan maintenance will be documented in the annual District Planning Progress Report or its equivalent. A plan amendment may be initiated because of the need to consider monitoring findings, new data, new or revised policy, a change in circumstances, or a proposed action that may result in the scope of resource uses or a change in the terms, conditions and decisions of the approved plan.

In addition to being routinely monitored, the RMP will be formally evaluated at the end of every third year after implementation begins. This periodic evaluation will occur until such time as preparation of new plans supersedes the RMP over a substantial majority of its area. The reason for the formal evaluation is to determine whether there is significant cause for an amendment or revision of the plan. Evaluation includes a cumulative analysis of monitoring records, with the broader purpose of determining if the plan's goals and objectives are being, or are likely to be, met and whether the goals and objectives were realistic and achievable in the first place.



Evaluation will also assess whether changed circumstances (such as changes in the plans of other government agencies or American Indian tribes) or new information so altered the levels or methods of activities or the expected impacts (on water, wildlife, socioeconomic conditions, etc.), that the environmental consequences of the plan may be seriously different than those anticipated in this RMP.

As part of these third year evaluations, the allowable sale quantity will be re-evaluated to incorporate the results of watershed analyses; monitoring; further inventory; and site-specific, watershed-specific or province-level decisions.

If an evaluation concludes that the plan's goals are not achievable, a plan amendment or revision will be initiated. If the evaluation concludes that land use allocations or management direction need to be modified, a plan amendment or revision may be appropriate. An analysis will address the need for either. If the analysis determines that amending the plan is appropriate, the amendment process set forth in 43 CFR 1610.5-5 or 1610.5-6 would be followed. If an amendment is not appropriate, NEPA procedures would still be followed before the modification is approved, along with coordination through the Regional Ecosystem Office and the Regional Interagency Executive Committee if SEIS ROD standards and guidelines or land-use allocations would be modified. Figure 1 shows how monitoring and/or evaluation could lead to a revision of management direction or other changes in the RMP.

No additional evaluations of this type will be done unless some changed circumstance or unusual event causes the continuing validity of the plan to be questioned. Following completion of each plan evaluation, a summary of its findings will be included in the district's annual program summary.

In the future—after preparation of new plans that would substantially supersede the RMP is well under way—interim management adjustments may be made without a plan amendment if some circumstances change or unusual events occur of a magnitude that question BLM's ability to meet the remaining objectives. The kind of circumstance which could lead to such an adjustment might be an announcement of research findings that clearly establish some of the plan's goals and objectives are unlikely to be met. The kind of unusual event which could lead to such an adjustment might be a major catastrophe such as a wildfire or windstorm causing extensive damage to forest stands. Similar interim adjustments can be made at any time during

the life of the plan, pending evaluation and possible plan amendment.

## Adaptive Management

This approach to evaluation and interim adjustment will frame a process of adaptive management, permitting effective response to changing knowledge. Adaptive management is a continuing process of action-based monitoring, researching, evaluating and adjusting with the objective of improving the implementation and achieving the goals of the RMP. The RMP is based on current scientific knowledge. To be successful, it must have the flexibility to adapt and respond to new information. Under the concept of adaptive management, new information will be evaluated and a decision will be made whether to make adjustments or changes. The adaptive management approach will enable resource managers to determine how well management actions meet their objectives and what steps are needed to modify activities to increase success or improve results.

The adaptive management process will be implemented to maximize the benefits and efficiency of the RMP. This may result in the refinement of management direction or land-use allocations which may require amendment of the RMP. Adaptive management decisions may vary in scale from individual watersheds, specific forest types, physiographic provinces, or the entire planning area. Many adaptive management modifications may not require formal changes to the RMP.

The model displayed in Figure 2 identifies the various steps, activities, and outline of a procedure for the adaptive management process. This diagram conveys the general concept and is valuable as a starting point for understanding adaptive management. A full, detailed explanation of the model—which is beyond the scope of this discussion—would require that each step be further described and defined.

New information that would compel an adjustment of strategy may come from monitoring, research, statutory or regulatory changes, organizational or process assessments, or any number of additional sources. During the evaluation process, personnel will analyze the information to determine the nature, scope, and importance of the new information.



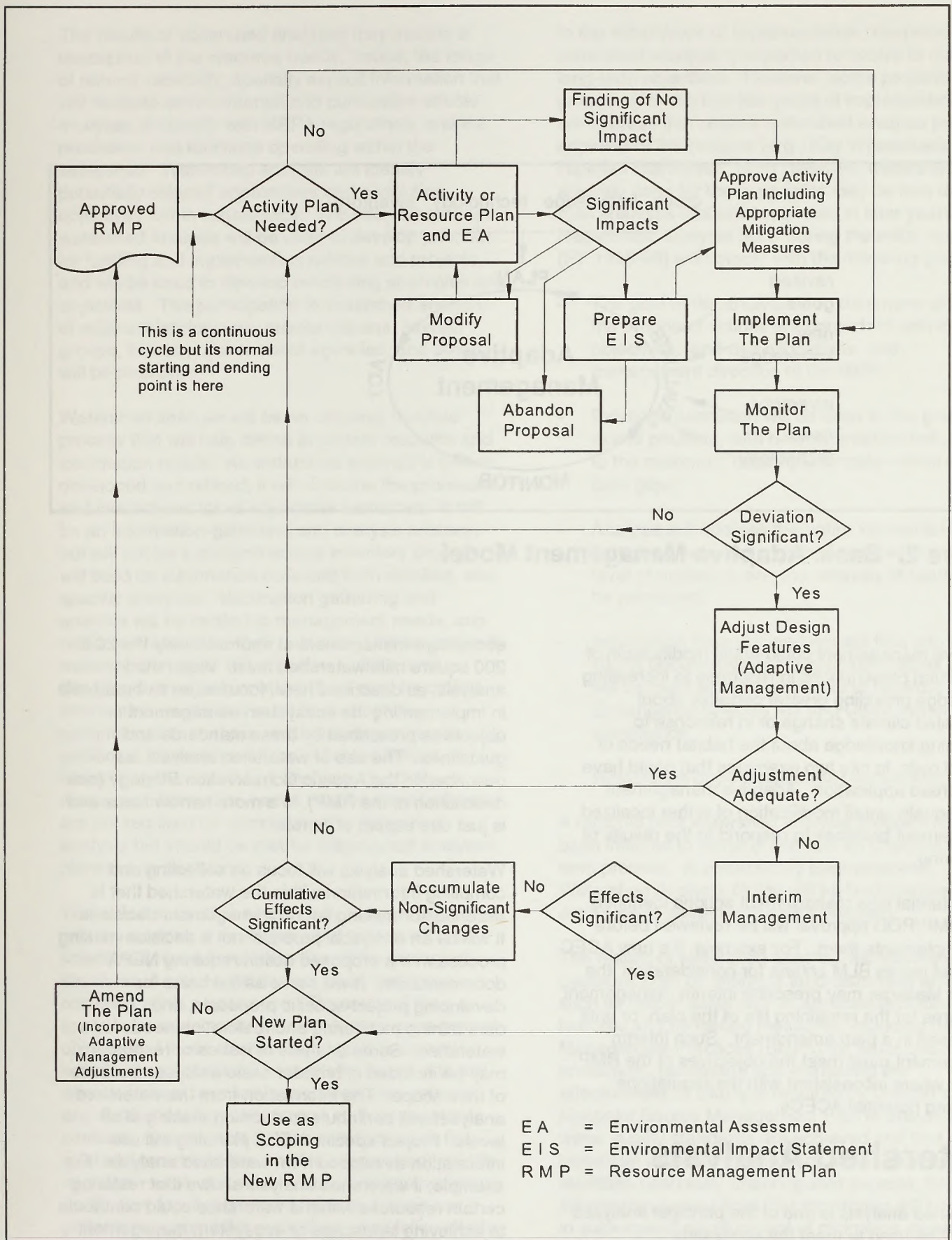


**Figure 1. Process for Changing the Resource Management Plan**



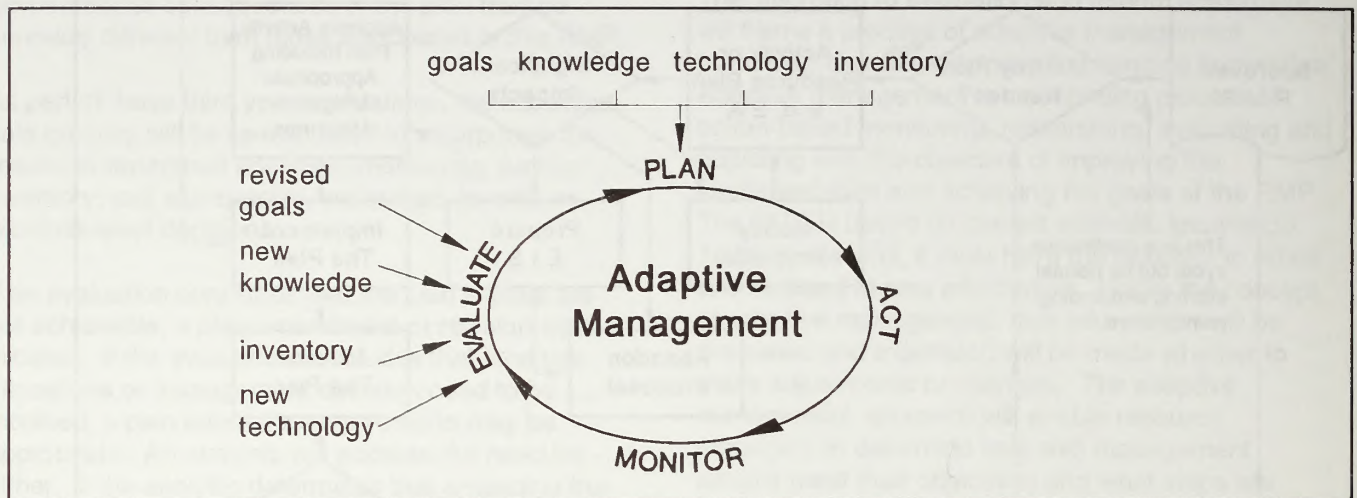


**Figure 2. Basic Adaptive Management Model**

Adaptive management could entail modification of silvicultural prescriptions in response to increasing knowledge providing greater certainty about anticipated climate change or in response to increasing knowledge about the habitat needs of spotted owls, to cite two examples that could have widespread application. Adaptive management could equally entail modification of rather localized management practices to respond to the results of monitoring.

Any potential new management actions identified after RMP/ROD approval will be reviewed before BLM implements them. For example, if a new ACEC proposal meets BLM criteria for consideration, the District Manager may prescribe interim management measures for the remaining life of the plan, or until addressed in a plan amendment. Such interim management must meet the objectives of the RMP, except where inconsistent with the regulations regarding potential ACECs.

## Watershed Analysis

Watershed analysis is one of the principal analyses that will be used to meet the ecosystem management objectives of this RMP. Watershed analyses will be the mechanism to support

ecosystem management at approximately the 20 to 200 square mile watershed level. Watershed analysis, as described here, focuses on its broad role in implementing the ecosystem management objectives prescribed by these standards and guidelines. The use of watershed analysis, as described in the Aquatic Conservation Strategy (see description of the RMP), is a more narrow focus and is just one aspect of its role.

Watershed analysis will focus on collecting and compiling information within the watershed that is essential for making sound management decisions. It will be an analytical process, not a decision-making process with a proposed action requiring NEPA documentation. It will serve as the basis for developing project-specific proposals, and determining monitoring and restoration needs for a watershed. Some analysis of issues or resources may be included in broader scale analyses because of their scope. The information from the watershed analyses will contribute to decision making at all levels. Project-specific NEPA planning will use information developed from watershed analysis. For example, if watershed analysis shows that restoring certain resources within a watershed could contribute to achieving landscape or ecosystem management objectives, then subsequent decisions will need to address that information.



The results of watershed analyses may include a description of the resource needs, issues, the range of natural variability, spatially explicit information that will facilitate environmental and cumulative effects analyses to comply with NEPA regulations, and the processes and functions operating within the watershed. Watershed analysis will identify potentially disjunct approaches and conflicting objectives within watersheds. The information from watershed analysis will be used to develop priorities for funding and implementing actions and projects, and will be used to develop monitoring strategies and objectives. The participation in watershed analysis of adjacent landowners, private citizens, interest groups, industry, government agencies, and others will be promoted.

Watershed analysis will be an ongoing, iterative process that will help define important resource and information needs. As watershed analysis is further developed and refined, it will describe the processes and interactions for all applicable resources. It will be an information-gathering and analysis process, but will not be a comprehensive inventory process. It will build on information collected from detailed, site-specific analyses. Information gathering and analysis will be related to management needs, and not be performed for their own sake. While generally watershed analysis will organize, collate, and describe existing information, there may be critical information needs that must be met before completing the analysis. In those instances, the additional information will be collected before completing the watershed analysis. In other instances, information needs may be identified that are not required for completing the watershed analysis but should be met for subsequent analyses, planning, or decisions.

Watershed analysis is a technically rigorous procedure with the purpose of developing and documenting a scientifically-based understanding of the ecological structures, functions, processes, and interactions occurring within a watershed. The scope of the analysis for implementing the ecosystem management objectives of these standards and guidelines may include all aspects of the ecosystem. Some of these aspects include beneficial uses; vegetative patterns and distribution; flow phenomena such as vegetation corridors, streams, and riparian corridors; wind; fire (wild and prescribed fire, and fire suppression); wildlife migration routes; dispersal habitat; terrestrial vertebrate distribution; locally significant habitats; human use patterns throughout the ecosystem; cumulative effects; and hydrology. The number and detail of these aspects considered will depend on the issues pertaining to a given watershed.

In the initial years of implementation, the process for watershed analysis is expected to evolve to meet long-term objectives. However, some projects proposed for the first few years of implementation are in areas that require watershed analysis prior to approval of the projects (e.g., Key Watersheds and Riparian Reserves). In FY 1995-96, watershed analysis done for these projects may be less detailed than analyses that are completed in later years. Regardless, analysis done during the initial years (FY 1995-96) will comply with the following guidance:

- The goal of the analysis is to determine whether the proposed actions are consistent with the objectives, land-use allocations, and management direction of the RMP.
- Existing information will be used to the greatest extent possible, with new information collected—to the maximum extent practicable—to fill crucial data gaps.
- Analysis will address the entire watershed, even though some areas may be analyzed at a lower level of precision, and the analysis of issues may be prioritized.
- Information from the analysis will flow into the NEPA documentation for specific projects and will be used where practicable to facilitate Endangered Species Act and Clean Water Act compliance.
- Restoration opportunities will be identified.

A regional pilot watershed analysis program has been initiated to develop and test an effective long-term process. A scientifically peer-reviewed Watershed Analysis Guide will be finalized based on experiences gained in the pilot program.

The results of watershed analysis will influence final decisions both on timing of land-disturbing activities such as timber sales and on application of design features and mitigating measures, including Best Management Practices (BMPs) for water quality protection. Monitoring and evaluating the effectiveness of BMPs is required by Oregon's Nonpoint Source Management Plan to ensure that water quality standards are achieved and that beneficial uses are maintained. When monitoring identifies previously unanticipated impacts, the information gained from that monitoring will be used in subsequent development of mitigating measures, including BMPs, and also considered in future watershed analyses.



Factored into these decisions on land-disturbing activities, where appropriate, will be an assessment of compliance with the anti-degradation policy of Oregon's Water Quality Standards (OAR 340-41-026(1)(a)). These standards apply to existing high quality waters which exceed those levels necessary to support recreation and the propagation of fish, shellfish, and wildlife.

Proposed timber sales and other land-disturbing activities will incorporate the interactive (adaptive management) process for developing, implementing, and evaluating nonpoint control (BMPs) to determine if water quality goals have been met. Modification of non-point-source controls, including BMPs, will be adjusted based upon sound scientific evidence. Where necessary, appropriate actions to mitigate adverse effects on water quality will be taken to protect designated beneficial uses.

## Requirement for Further Environmental Analysis

Site-specific planning by Interdisciplinary Teams (IDTs) would precede most on-the-ground management activities. IDTs are comprised of relevant resource management disciplines. The IDT process includes field examination of resources, identification of alternative management actions, and analysis. Adjacent land uses would be considered during site-specific land management planning.

Site-specific environmental analysis and documentation (including environmental assessments (EAs), categorical exclusions, or administrative determinations where appropriate, and RMP conformance determination) will be accomplished for each action or type of treatment under consideration. Where the action is to be accomplished by a contractor or timber sale purchaser, the EA or other environmental analysis is a primary means for determining appropriate contract stipulations. Where the action is to be accomplished by BLM personnel, the environmental analysis is a primary means for determining how the action will be conducted. When determining whether activities retard or prevent attainment of Aquatic Conservation Strategy objectives, the scale of analysis typically will be BLM analytical watersheds or similar units.

Watershed analysis or province analysis will often precede environmental analysis of specific proposals, and the findings of such preceding analyses will be addressed in documentation of the environmental analyses. Similarly, late-successional

reserve assessments will precede activities in those reserves and their findings will be addressed in environmental analysis of those activities. Ultimately, watershed analysis will serve as the basis for developing project-specific proposals and determining monitoring and restoration needs for a watershed. Project-specific NEPA planning will use information developed from watershed analysis. By improving understanding of the ecological structures, functions, processes, and interactions occurring within a watershed, watershed analysis will enhance the ability to predict direct, indirect, and cumulative impacts of specific proposals in that watershed.

Analyses of proposals for the use of prescribed fire will adhere to the requirements of the Clean Air Act and the State Implementation Plan (including the Visibility Protection Plan and Smoke Management Plan). To evaluate whether BLM actions comply with the State Implementation Plan, conformity determinations will be conducted in association with site-specific environmental analysis where emissions can be most reasonably forecasted in quantified terms. These analyses will specifically evaluate the effects of project-specific prescribed burning on nonattainment areas.

Accurate assessment of local and airshed-level air quality effects of ecosystem management may require cumulative effects analysis, reflecting all relevant BLM actions, as well as expected actions of other parties. Coordination with other agencies is implicit. Cumulative effects analysis will include consideration of the effects on visibility and regional haze. Where extensive fuel hazard reduction by prescribed burning is considered, the analysis also will consider the impact of burning on wildfire emissions. This will be done in a quantified tradeoff analysis, comparing emissions from prescribed fire with potential emissions from wildfires if prescribed burning is not accomplished. Factors considered when establishing the geographic boundaries for a cumulative effects analysis include whether the action will result in impacts that cross administrative boundaries, and whether the action will affect sensitive air quality regions (e.g., Class I areas and nonattainment areas). Resultant analysis may be based on airsheds.

Interdisciplinary impact analysis will be tiered within the framework of applicable environmental analysis. Tiering is used to prepare more specific documents without duplicating relevant parts of previously-prepared general documents. The more specific EA or other environmental analysis cannot lead directly to a change in the decisions based on the more general EIS to which it is tiered. It could, however,



result in some interim management direction pending plan revision, or a proposal to amend the plan. If an EA indicates potential for significant impacts that are seriously different from those described in an existing EIS, a new EIS (or supplement to an existing EIS) may be required.

Specific proposals for treatment to manage competing vegetation and for control of noxious weeds will be addressed in site-specific EAs.

Availability of EAs for public review will be announced in a minimum of one, and generally all, of the following ways:

- News release distributed to the newsroom of area newspapers, TV, and radio stations.
- Notices posted in the public area at the Coos Bay District Office.
- Mailings to known interested/affected people, groups, tribal units, governmental agencies, and businesses. These mailings may include, but are not limited to, District Program Periodic District Planning and Project Update progress reports.
- Legal notices in one or more newspapers circulated in the project area.

## Management of Newly Acquired Lands

Lands may come under BLM administration after completion of the RMP/ROD through exchange, donation, purchase, revocation of withdrawals of other federal agencies, or relinquishment of Recreation and Public Purpose Act leases. Newly acquired or administered lands or interests in lands will be managed for their highest potential or for the purposes for which they are acquired. For example, lands acquired within "special management areas" with Congressional or RMP allocation/direction will be managed in conformance with guidelines for those areas. If lands with unique or fragile resource values are acquired, it may be appropriate to protect those values until the next plan revision.

Lands acquired with no identified special values or management goals will be managed in the same manner as surrounding or comparable BLM-administered lands. This implies typical timber harvest opportunities, intensive timber management practices, management of the mineral estate,

standard operating procedures, and pre-committed mitigation measures.

## The Budget Link

The initial annual cost of implementing the RMP is reflected in the President's Fiscal Year 1995 budget, which has approximately 18.1 million dollars for the Coos Bay District. There is not yet, however, a clear understanding of what the management needs and costs of the ecosystem management approach will be, so future year budget estimates may differ as experience is gained in implementing the RMP.

Timber sale levels and associated programs will be reduced if annual funding is not sufficient to support the relevant actions assumed in the plan, including mitigation and monitoring. The extent of the reduction will be based on the principle of program balance as envisioned in the plan. For example, if funding in a given year is sufficient only to support half of planned annual investments in precommercial thinning, the otherwise anticipated timber sale volume for that year would be reduced by half of the portion of the declared allowable sale quantity (ASQ) attributable to precommercial thinning. If, in subsequent years, budget levels permit BLM to eliminate the backlog of unfunded investments that have accumulated, timber sale levels will be adjusted upward to the extent that the work can be accomplished. If subsequent budget levels create a cumulative shortfall over a few years, the ASQ will be adjusted downward.

This principle will apply similarly to management of roads and other facilities. If maintenance of such facilities is not adequately funded, some of them may be closed to scale back management commitments to the level that is budgeted.

## Monitoring

The BLM planning regulations (43 CFR 1610.4-9) call for the monitoring and evaluation of resource management plans at appropriate intervals.

Monitoring is an essential component of natural resource management because it provides information on the relative success of management strategies. The implementation of the RMP will be monitored to ensure that management actions: follow prescribed management direction (implementation monitoring), meet desired objectives (effectiveness monitoring), and are based on accurate assumptions (validation monitoring) (see Appendix K). Some



effectiveness and most validation monitoring will be accomplished by formal research.

Monitoring will be an integral component of many new management approaches such as adaptive management and ecosystem management.

Adaptive management is based on monitoring that is sufficiently sensitive to detect relevant ecological changes. In addition, the success of adaptive management depends on the accuracy and credibility of information obtained through inventories and monitoring. Close coordination and interaction between monitoring and research are essential for the adaptive management process to succeed. Data obtained through systematic and statistically valid monitoring can be used by scientists to develop research hypotheses related to priority issues. Conversely, the results obtained through research can be used to further refine the protocols and strategies used to monitor and evaluate the effectiveness of RMP implementation.

Monitoring results will provide managers with the information to determine whether an objective has been met, and whether to continue or modify the management direction. Findings obtained through monitoring, together with research and other new information, will provide a basis for adaptive management changes to the plan. The processes of monitoring and adaptive management share the goal of improving effectiveness and permitting dynamic response to increased knowledge and a changing landscape. The monitoring program itself will not remain static. The monitoring plan will be periodically evaluated to ascertain that the monitoring questions and standards are still relevant and to make adjustments as appropriate. Some monitoring items may be discontinued, and others may be added as knowledge and issues change with implementation.

Watershed analysis is one of the principal analyses that will be used to meet the ecosystem management objectives. Information from watershed analysis will also be used in developing monitoring strategies and objectives. Specific to monitoring, the results and findings from watershed analysis are used to reveal the most useful indicators for monitoring environmental change, detect magnitude and duration of changes in conditions, formulate and test hypotheses about the causes of the changes, understand these causes and predict impacts, and manage the ecosystem for desired outcomes. Watershed analysis will provide information about patterns and processes within a watershed and about monitoring at that scale.

The monitoring process will collect information in the most cost-effective manner and may involve sampling or remote sensing. Monitoring could be so costly as to be prohibitive if it is not carefully and reasonably designed. Therefore, it will not be necessary or desirable to monitor every management action or direction. Unnecessary detail and unacceptable costs will be avoided by focusing on key monitoring questions and proper sampling methods. The level and intensity of monitoring will vary, depending on the sensitivity of the resource or area and the scope of the proposed management activity.

RMP monitoring will be conducted at multiple levels and scales. Monitoring will be conducted in a manner that allows localized information to be compiled and considered in a broader regional context, addressing both local and regional issues. At the project level, monitoring will examine how well specific management direction has been applied on the ground and how effectively it produces expected results. Monitoring at broader levels will measure how successfully projects and other activities have achieved the objectives for those management areas.

Monitoring will be coordinated with other appropriate agencies and organizations to enhance the efficiency and usefulness of the results across a variety of administrative units and provinces. The approach will build on past and present monitoring work. In addition, specific monitoring protocols, criteria, goals, and reporting formats will be developed, subject to review and guidance of the Regional Ecosystem Office. This guidance will be used to augment and revise the monitoring plan and to facilitate the process of aggregating and analyzing information on provincial or regional levels.

Monitoring results will be reported in an Annual Program Summary, to be published starting the second year following initial implementation of this RMP. The Annual Program Summary will track and assess the progress of plan implementation, state the findings made through monitoring, specifically address the Implementation Monitoring Questions posed in each section of this Monitoring Plan, and serve as a report to the public.

Each resource area will be responsible for the collection, compilation, and analysis of much of the data gained through monitoring activities. Resource areas will report their findings and recommendations to the district for consolidation and publication in the Annual Program Summary.



The monitoring plan for the RMP is tiered to the Monitoring and Evaluation Plan for the SEIS Record of Decision. The SEIS Monitoring and Evaluation Plan is not yet fully refined. Therefore, the RMP Monitoring Plan is not complete. As components of the regional (SEIS) monitoring and evaluation plan are completed or refined, the RMP monitoring plan will be conformed to the regional plan. BLM has been, and will continue to be, a full participant in the development of the SEIS Monitoring and Evaluation Plan. Ongoing BLM effectiveness and validation monitoring will continue where it is relevant to Resource Management Plan direction (e.g., stocking surveys, threatened and endangered species studies, and water quality measurements).

The SEIS and RMP monitoring plans will not identify all monitoring the Coos Bay District will do. Activity and project plans may identify monitoring needs of their own.

## Research

A research plan will be developed by the Research and Monitoring Committee identified in the SEIS ROD.

Ongoing research in Riparian Reserves will be analyzed to ensure that significant risk to the watershed does not exist. If significant risk is present and cannot be mitigated, study sites will be relocated. Some activities not otherwise consistent with the objectives may be appropriate, particularly if the activities will test critical assumptions of the President's Forest Plan; will produce results important for establishing or accelerating vegetation and structural characteristics for maintaining or restoring aquatic and riparian ecosystems; or represent continuation of long-term research. These activities will be considered only if there are no equivalent opportunities outside of Riparian Reserves and Key Watersheds.



# Glossary

**Activity Plan** - A document that describes management objectives, actions, and projects to implement decisions of the RMP or other planning documents. Usually prepared for one or more resources in a specific area.

**Allowable Sale Quantity (ASQ)** - The gross amount of timber volume, including salvage, that may be sold annually from a specified area over a stated period of time in accordance with the management plan. Formerly referred to as "allowable cut."

**Aquatic Ecosystem** - Any body of water—such as a stream, lake, or estuary, and all organisms and nonliving components within it—functioning as a natural system.

**Area of Critical Environmental Concern (ACEC)** - An area of BLM-administered lands where special management attention is needed to protect and prevent irreparable damage to important historic, cultural or scenic values, fish and wildlife resources or other natural systems or processes; or to protect life and provide safety from natural hazards. (Also see Potential ACEC.)

**Area Regulation** - A method of scheduling timber harvest based on dividing the total acres by an assumed rotation.

**Available Forest Land** - That portion of the forested acres for which timber production is planned and included within the acres contributing to the allowable sale quantity (ASQ). This includes both lands allocated primarily to timber production and lands on which timber production is a secondary objective.

**Back Country Byway** - A road segment designated as part of the National Scenic Byway System.

**Beneficial Use** - The reasonable use of water for a purpose consistent with the laws and best interest of the peoples of the state. Such uses include, but are not limited to, the following: instream, out of stream and groundwater uses, domestic, municipal, industrial water supply, mining, irrigation, livestock watering, fish and aquatic life, wildlife, fishing, water contact recreation, aesthetics and scenic attraction, hydropower, and commercial navigation.

**Best Management Practices (BMP)** - Methods, measures, or practices designed to prevent or reduce water pollution. Not limited to structural and nonstructural controls, and procedures for operations and maintenance. Usually, BMPs are applied as a system of practices rather than a single practice.

**Biological Diversity** - The variety of life and its processes.

**Biological Legacies** - Components of the forest stand (e.g., large trees, down logs, and snags) reserved from harvest to maintain site productivity and to provide structure and ecological functions in subsequent forest stands.

**Board Foot (BF)** - A unit of solid wood that is one foot square and one inch thick.

**Candidate Species** - Those plants and animals included in Federal Register "Notices of Review" that are being considered by the Fish and Wildlife Service (USFWS) for listing as threatened or endangered. There are two categories that are of primary concern to BLM. These are:

Category 1. Taxa for which the USFWS has substantial information on hand to support proposing the species for listing as threatened or endangered. Listing proposals are either being prepared or have been delayed by higher priority listing work.

Category 2. Taxa for which the USFWS has information to indicate that listing is possibly appropriate. Additional information is being collected.



**Casual Use** - Activities ordinarily resulting in negligible disturbance of federal lands and resources.

**Commercial Forest Land** - Forest land producing or capable of producing at least 20 cubic feet of wood per acre per year of commercial tree species.

**Commercial Thinning** - The removal of merchantable trees from an even-aged stand to encourage growth of the remaining trees.

**Commercial Tree Species** - Conifer species used to calculate the commercial forest land ASQ. They are typically utilized as saw timber and include species such as Douglas-fir, hemlock, spruce, fir, pine, and cedar.

**Commodity Resources** - Goods or products of economic use or value.

**Community Stability** - The capacity of a community (incorporated town or county) to absorb and cope with change without major hardship to institutions or groups within the community.

**Community Water System** - See Public Water System.

**Congressionally Reserved Areas** - Areas that require Congressional enactment for their establishment, such as national parks, wilderness, and wild and scenic rivers.

**Connectivity** - A measure of the extent to which conditions between late-successional/old-growth forest areas provide habitat for breeding, feeding, dispersal, and movement of late-successional/old-growth-associated wildlife and fish species.

**Consistency** - Under the Federal Land Policy and Management Act, the adherence of BLM resource management plans to the terms, conditions, and decisions of officially approved and adopted resource related plans, or in their absence, with policies and programs of other federal agencies, state and local governments and Indian tribes, so long as the plans are also consistent with the purposes, policies and programs of federal laws and regulations applicable to BLM-administered lands. Under the Coastal Zone Management Act, the adherence to approved state management programs to the maximum extent practicable, of federal agency activities affecting the defined coastal zone.

**Constrained Timber Production Base** - Acreage managed for timber production at less than full intensity in consideration of nontimber resource management objectives.

**Coos Bay Wagon Road (CBWR) Lands** - Public lands granted to the Southern Oregon Company and subsequently reconveyed to the United States.

**Critical Habitat** - Under the Endangered Species Act, (1) the specific areas within the geographic area occupied by a federally listed species on which are found physical and biological features essential to the conservation of the species, and that may require special management considerations or protection; and (2) specific areas outside the geographic area occupied by a listed species when it is determined that such areas are essential for the conservation of the species.

**Cubic Foot** - A unit of solid wood that is one foot square and one foot thick.

**Cull** - A tree or log that does not meet merchantable specifications.

**Cultural Resource** - Any definite location of past human activity identifiable through field survey, historical documentation, or oral evidence. Includes archaeological or architectural sites, structures, or places; and places of traditional cultural or religious importance to specified groups whether or not represented by physical remains.

**Cumulative Effect** - The impact that results from identified actions when they are added to other past, present, and reasonably foreseeable future actions regardless of who undertakes such other actions. Cumulative effects can result from individually minor but collectively significant actions taking place over a period of time.



## **Glossary**

**Density Management** - Cutting of trees for the primary purpose of widening their spacing so that growth of remaining trees can be accelerated. Density management harvest can also be used to improve forest health, open the forest canopy, or accelerate the attainment of old growth characteristics if maintenance or restoration of biological diversity is the objective.

**Diameter At Breast Height (dbh)** - The diameter of a tree 4.5 feet above the ground on the uphill side of the tree.

**Dispersed Recreation** - Outdoor recreation in which visitors are diffused over relatively large areas. Where facilities or developments are provided, they are primarily for access and protection of the environment rather than comfort or convenience of the user.

**District Defined Reserves** - Areas designated for the protection of specific resources, flora, fauna, and other values. These areas are not included in other land use allocations nor in the calculation of the ASQ.

**Domestic Water Supply** - Water used for human consumption.

**Ecological Health** - The condition of an ecosystem in which processes and functions are adequate to maintain diversity of biotic communities commensurate with those initially found there.

**Ecosystem Diversity** - The variety of species and ecological processes that occur in different physical settings.

**Ecosystem Management** - The management of lands and their resources to meet objectives based on their whole ecosystem function rather than on their character in isolation. Management objectives blend long-term needs of people and environmental values in such a way that the lands will support diverse, healthy, productive, and sustainable ecosystems.

**Eligible River** - A river or river segment found—through interdisciplinary team and, in some cases, interagency review—to meet Wild and Scenic River Act criteria of being free-flowing and possessing one or more outstandingly remarkable values.

**Endangered Species** - Any species defined through the Endangered Species Act as being in danger of extinction throughout all or a significant portion of its range and published in the Federal Register.

**Environmental Assessment (EA)** - A systematic analysis of site-specific BLM activities used to determine whether such activities have a significant effect on the quality of the human environment and whether a formal environmental impact statement is required and also to aid an agency's compliance with NEPA when no EIS is necessary.

**Environmental Impact** - The positive or negative effect of any action upon a given area or resource.

**Environmental Impact Statement (EIS)** - A formal document to be filed with the Environmental Protection Agency and that considers significant environmental impacts expected from implementation of a major federal action.

**Ephemeral Streams** - Streams that contain running water only sporadically, such as during and following storm events.

**Extensive Recreation Management Areas (ERMAs)** - All BLM-administered lands outside Special Recreation Management Areas. These areas may include developed and primitive recreation sites with minimal facilities.

**Forest Health** - The ability of forest ecosystems to remain productive, resilient, and stable over time and to withstand the effects of periodic natural or human-caused stresses such as drought, insect attack, disease, climatic changes, flood, resource management practices, and resource demands.

**Forest Land** - Land that is now, or is capable of becoming, at least 10 percent stocked with forest trees and that has not been developed for nontimber use.



**Fragile Nonsuitable** - A TPCC classification indicating forest land having fragile conditions, which, if harvested, would result in reduced future productivity—even if special harvest or restrictive measures are applied. These fragile conditions are related to soils, geologic structure, topography, and ground water.

**Full Log Suspension** - Suspension of the entire log above the ground during yarding operations.

**General Forest Management Area (GFMA)** - Forest land managed on a regeneration harvest cycle of 70-110 years. A biological legacy of six to eight green trees per acre would be retained to assure forest health. Commercial thinning would be applied where practicable and where research indicates there would be gains in timber production.

**Genetic Diversity** - The variety within populations of a species.

**Green Tree Retention** - A stand management practice in which live trees—as well as snags and large down wood—are left as biological legacies within harvest units to provide habitat components over the next management cycle.

**Habitat Diversity** - The number of different types of habitat within a given area.

**Hardwood Site** - A forest site occupied by hardwoods that is unsuitable for the production of conifer species.

**Hazardous Materials** - Anything that poses a substantive present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.

**Historic Site** - A cultural resource resulting from activities or events dating to the historic period (generally post AD 1830 in western Oregon).

**Improved Seed** - Seed originated from a seed orchard or selected tree(s) whose genetic superiority in one or more characters important to forestry has been proven by tests conducted in specific environments.

**Instant Study Area** - A natural area formally identified by BLM for accelerated wilderness review by notice published before October 21, 1975.

**Integrated Pest Management (IPM)** - A systematic approach that uses a variety of techniques to reduce pest damage or unwanted vegetation to tolerable levels. IPM techniques may include natural predators and parasites, genetically resistant hosts, environmental modifications, and—when necessary and appropriate—chemical pesticides or herbicides.

**Integrated Vegetation Management** - See Integrated Pest Management.

**Intensively Managed Timber Stands** - Forest stands managed to obtain a high level of timber volume or quality through investment in growth enhancing practices, such as precommercial thinning, commercial thinning, and fertilization. Not to be confused with the allocations of “lands available for intensive management of forest products.”

**Intensive Forest Management Practices** - The growth enhancing practices of release, precommercial thinning, commercial thinning, and fertilization that are designed to obtain a high level of timber volume or quality.

**Intermittent Stream** - Any nonpermanent, flowing drainage feature having a definable channel and evidence of annual scour or deposition. This includes what are sometimes referred to as ephemeral streams if they meet these two criteria.

**Landscape** - A heterogeneous land area with interacting ecosystems that are repeated in similar form throughout.

**Landscape Diversity** - The size, shape and connectivity of different ecosystems across a large area.



**Landscape Features** - The land and water form, vegetation, and structures that compose the characteristic landscape.

**Land Use Allocations** - Allocations that define allowable uses/activities, restricted uses/activities, and prohibited uses/activities. They may be expressed in terms of area such as acres or miles. Each allocation is associated with a specific management objective.

**Late-Successional Forests** - Forest seral stages that include mature and old-growth age classes, 80 years and older.

**Late-Successional Reserve (LSR)** - A forest in its mature and/or old-growth stages that has been reserved.

**Leasable Minerals** - Minerals that may be leased to private interests by the federal government. Includes oil, gas, geothermal resources, and coal.

**Locatable Minerals** - Minerals subject to exploration, development and disposal by staking mining claims as authorized by the Mining Law of 1872 (as amended). This includes valuable deposits of gold, silver, and other uncommon minerals not subject to lease or sale.

**Log Decomposition Class** - Any of five stages of deterioration of logs in the forest; stages range from essentially sound (class 1) to almost total decomposition (class 5).

**Management Actions/Direction** - Measures planned to achieve the stated objectives.

**Management Activity** - An activity undertaken for the purpose of harvesting, traversing, transporting, protecting, changing, replenishing, or otherwise using resources.

**Matrix Lands** - Federal land outside of reserves and special management areas that will be available for timber harvest at varying levels.

**Mineral Estate** - The ownership of the minerals at or beneath the surface of the land.

### Mineral Restriction Categories

**Closed Nondiscretionary:** Areas specifically closed to mineral exploration and development by authority of law, regulation, Secretarial decision (including Public Land Orders), or Executive Order.

**Closed Discretionary:** Areas closed to mineral exploration and development by authority of law or regulation, but where such lands can be opened by action of BLM without legislation, regulation change, Secretarial decision, or Executive Order.

**Open Standard Requirements:** Areas open to mineral exploration and development subject only to requirements over which BLM has no discretionary control such as the Clean Air/Clean Water Acts, National Environmental Policy Act, Resource Conservation and Recovery Act, Coastal Zone Management Act, Endangered Species Act, and the National Historic Preservation Act.

**Open Additional Restrictions:** Areas open to mineral exploration and development subject to additional restrictions that can be legally required by BLM pursuant to law, regulation, or other legal authority such as ACEC designation, ORV or other closure order, and community pit designation.

**Minimum Harvest Age** - The lowest age of a forest stand to be scheduled for final harvest.

**Mining Claims** - Portions of public lands claimed for possession of locatable mineral deposits by locating and recording under established rules and pursuant to the 1872 Mining Law.

**Mitigating Measures** - Modifications of actions that (1) avoid impacts by not taking a certain action or parts of an action, (2) minimize impacts by limiting the degree or magnitude of the action and its implementation, (3)



rectify impacts by repairing, rehabilitating, or restoring the affected environment, (4) reduce or eliminate impacts over time by preservation and maintenance operations during the life of the action, or (5) compensate for impacts by replacing or providing substitute resources or environments.

**Monitoring** - The process of collecting information to evaluate if objectives and anticipated or assumed results of a management plan are being realized or if implementation is proceeding as planned.

**Multi-aged Stand** - A forest stand that has more than one distinct age class arising from specific disturbance and regeneration events at various times. These stands normally will have multi-layered structure.

**Multi-layered Canopy** - Forest stands with two or more distinct tree layers in the canopy; also called multi-storied stands.

**Noncommercial Forest Land** - Land incapable of yielding at least 20 cubic feet of wood per acre per year of commercial species, or land that is capable of producing only noncommercial tree species.

**Noxious Plant** - A plant specified by law as being especially undesirable, troublesome, and difficult to control.

**Noxious Weed** - See Noxious Plant.

**O&C Lands** - Public lands granted to the Oregon and California Railroad Company and subsequently revested to the United States.

**Objectives** - Expressions of what are the desired end results of management efforts.

**Off-Highway Vehicle (OHV)** - Any motorized track or wheeled vehicle designed for cross country travel over natural terrain. (The term "Off-Highway Vehicle" is used in place of the term "Off-Road Vehicle" to comply with the purposes of Executive Orders 11644 and 11989. The definition for both terms is the same.)

### **Off-Highway Vehicle Designation**

**Open:** Designated areas and trails where off-highway vehicles may be operated subject to operating regulations and vehicle standards set forth in BLM Manuals 834I and 8343.

**Limited:** Designated areas and trails where off-highway vehicles are subject to restrictions limiting the number or types of vehicles, date, and time of use; limited to existing or designated roads and trails.

**Closed:** Areas and trails where the use of off-highway vehicles is permanently or temporarily prohibited. Emergency use is allowed.

**Old-Growth-Dependent Species** - An animal species so adapted that it can exist only in old growth forests.

**Outstandingly Remarkable Values (ORVs)** - Values among those listed in Section 1(b) of the Wild and Scenic Rivers Act: "scenic, recreational, geological, fish and wildlife, historical, cultural, or other similar values ..." Other similar values which may be considered include ecological, biological or botanical, paleontological, hydrological, scientific, or research.

**Overstory Removal** - The final stage of cutting where the remaining overstory trees are removed to allow the understory to grow. Overstory removal is generally accomplished three to five years after reforestation and when adequate stocking has been achieved.

**Partial Cutting** - Removal of selected trees from a forest stand.

**Partial Log Suspension** - During yarding operations, suspension of one end of the log above the ground.

**Particulates** - Finely-divided solid or liquid (other than water) particles in the air.



## **Glossary**

**Perennial Stream** - A stream that has running water on a year-round basis under normal climatic conditions.

**Plant Association** - A plant community type based on land management potential, successional patterns, and species composition.

**Plant Community** - An association of plants of various species found growing together in different areas with similar site characteristics.

**Plantation Maintenance** - Actions in an unestablished forest stand to promote the survival of desired crop trees.

**Plantation Release** - All activities associated with promoting the dominance and/or growth of desired tree species within an established forest stand.

**Precommercial Thinning** - The practice of removing some of the trees less than merchantable size from a stand so that remaining trees will grow faster.

**Prescribed Fire** - A fire burning under specified conditions to accomplish certain planned objectives.

**Progeny Test Site** - A test area for evaluating parent seed trees by comparing the growth of their offspring seedlings.

**Proposed Threatened or Endangered Species** - Plant or animal species proposed by the U.S. Fish & Wildlife Service to be biologically appropriate for listing as threatened or endangered and that is published in the Federal Register. It is not a final designation.

**Public Domain Lands (PD)** - Original holdings of the United States never granted or conveyed to other jurisdictions, or reacquired by exchange for other public domain lands.

**Public Water System** - A system providing piped water for public consumption. Such a system has at least 15 service connections or regularly serves at least 25 individuals.

**Recovery Plan** - A plan for the conservation and survival of an endangered species or a threatened species listed under the Endangered Species Act; the plan's purpose is to improve the status of the species to make continued listing unnecessary.

**Reforestation** - The natural or artificial restocking of an area with forest trees; most commonly used in reference to artificial stocking.

**Regeneration Harvest** - Timber harvest conducted with the partial objective of opening a forest stand to the point where favored tree species will be re-established.

**Regional Ecosystem Office (REO)** - The main function of this office is to provide staff work and support to the Regional Interagency Executive Committee so the standards and guidelines in the forest management plan can be successfully implemented.

**Research Natural Area (RNA)** - An area that contains natural resource values of scientific interest and is managed primarily for research and educational purposes.

**Reserved Federal Mineral Estate** - Land on which the federal government has ownership of minerals, but the surface estate is private or other nonfederal ownership.

**Resource Management Plan (RMP)** - A land use plan prepared by the BLM under current regulations in accordance with the Federal Land Policy and Management Act.

**Right-of-Way** - A permit or an easement that authorizes the use of public lands for specified purposes, such as pipelines, roads, telephone lines, electric lines, reservoirs, and the lands covered by such an easement or permit.



**Riparian Reserves (RR)** - Designated riparian areas found outside Late-Successional Reserves.

**Riparian Zone** - Those terrestrial areas where the vegetation complex and microclimate conditions are products of the combined presence and influence of perennial and/or intermittent water, associated high water tables, and soils that exhibit some wetness characteristics. Normally used to refer to the zone within which plants grow rooted in the water table of these rivers, streams, lakes, ponds, reservoirs, springs, marshes, seeps, bogs, and wet meadows.

**Rural Interface Areas (RIA)** - Areas where BLM-administered lands are adjacent to or intermingled with privately-owned lands zoned for 1- to 20-acre lots, or areas that already have residential development.

**Salable Minerals** - High volume, low value mineral resources including common varieties of rock, clay, decorative stone, sand, and gravel.

**Seed Orchard** - A plantation of clones or seedlings from selected trees; isolated to reduce pollination from outside sources; weeded of undesirables; and cultured for early and abundant production of seed.

**Selection Cutting** - A method of uneven-aged management involving the harvesting of single trees from stands (single-tree selection) or in groups (group selection) without harvesting the entire stand at any one time.

**Seral Stages** - The series of relatively transitory plant communities that develop during ecological succession from bare ground to the climax stage. There are five stages:

**Early Seral Stage:** The period in the life of a forest stand from crown closure to ages 15-40. Due to stand density, the brush, grass, or herbs rapidly decrease in the stand. Hiding cover may be present.

**Mid Seral Stage:** The period in the life of a forest stand from crown closure to first merchantability. Usually ages 15 through 40. Due to stand density, the brush, grass, or herbs rapidly decrease in the stand. Hiding cover is usually present.

**Late Seral Stage:** The period in the life of a forest stand from first merchantability to culmination of mean annual increment. Usually ages 40 to 100 years of age. Forest stands are dominated by conifers or hardwoods; canopy closure often approaches 100 percent. During this period, stand diversity is minimal, except that conifer mortality rates and snag formation will be fairly rapid. Big game hiding and thermal cover is present. Forage is minimal except in understocked stands.

**Mature Seral Stage:** The period in the life of a forest stand from culmination of mean annual increment to an old-growth stage or to 200 years. Conifer and hardwood growth gradually decline, and larger trees increase significantly in size. This is a time of gradually increasing stand diversity. Understory development increases in response to openings in the canopy from disease, insects, and windthrow. Vertical diversity increases. Larger snags are formed. Big game hiding cover, thermal cover, and some forage are present.

**Old-Growth:** This stage constitutes the potential plant community capable of existing on a site given the frequency of natural disturbance events. For forest communities, this stage exists from approximately age 200 until the time when stand replacement occurs and secondary succession begins again. Depending on fire frequency and intensity, old-growth forests may have different structures, species composition, and age distributions. In forests with longer periods between natural disturbance, the forest structure will be more even-aged at late mature or early old growth stages.

As mortality occurs, stands develop greater structural complexity. Replacement of trees lost to fire, windthrow, or insects results in the creation of a multi-layered canopy. There may be a shift toward more shade-tolerant species. Big game hiding cover, thermal cover, and forage is present.

**Silvicultural Prescription** - A professional plan for controlling the establishment, composition, constitution, and growth of forests.



## Glossary

**Silvicultural System** - A planned sequence of treatments over the entire life of a forest stand needed to meet management objectives.

**Site Index** - A measure of forest productivity expressed as the height of the tallest trees in a stand at an index age.

**Site Preparation** - Any action taken in conjunction with a reforestation effort (natural or artificial) to create an environment that is favorable for survival of suitable trees during the first growing season. This environment can be created by altering ground cover, soil, or microsite conditions through using biological, mechanical, or manual clearing, prescribed burns, herbicides, or a combination of methods.

**Skyline Yarding** - A cable yarding system using one of the cables to support a carriage from which logs are suspended and then pulled to a landing.

**Slash** - The branches, bark, tops, cull logs, and broken or uprooted trees left on the ground after logging.

**Smoke Management** - Conducting a prescribed fire under suitable fuel moisture and meteorological conditions with firing techniques that keep smoke impact on the environment within designated limits.

**Snag** - Any standing dead, partially-dead, or defective (cull) tree at least 10 inches in diameter at breast height (dbh) and at least 6 feet tall. A hard snag is composed primarily of sound wood and is generally merchantable. A soft snag is composed primarily of wood in advanced stages of decay and deterioration; generally not merchantable.

**Special Areas** - Areas that may need special management, such as management as an ACEC, RNA, environmental education area, or other special category.

**Special Forest Products (SFP)** - Firewood, shake bolts, mushrooms, ferns, floral greens, berries, mosses, bark, grasses, and other forest material that could be harvested in accordance with the objectives and guidelines in the proposed resource management plan.

**Special Recreation Management Area (SRMA)** - An area where a commitment has been made to provide specific recreation activity and experience opportunities. These areas usually require a high level of recreation investment and/or management. They include recreation sites, but recreation sites alone do not constitute SRMAs.

**Special Status Species** - Plant or animal species falling in any of the following categories:

- Threatened or Endangered Species
- Proposed Threatened or Endangered Species
- Candidate Species
- State Listed Species
- Bureau Sensitive Species
- Bureau Assessment Species

**Species Diversity** - The number, different kinds, and relative abundance of species.

**Split Estate** - An area of land where the surface is nonfederally owned and the subsurface mineral resources are federally owned or vice versa.

**Stand (Tree Stand)** - An aggregation of trees occupying a specific area and sufficiently uniform in composition, age, arrangement, and condition to make it distinguishable from the forest in adjoining areas.

**Stand Density** - An expression of the number and size of trees on a forest site. May be expressed in terms of numbers of trees per acre, basal area, stand density index, or relative density index.



**State Historic Preservation Officer (SHPO)** - The state official authorized to act as a liaison to the Secretary of the Interior for purposes of implementing the National Historic Preservation Act of 1966.

**State Implementation Plan (SIP)** - A state document required by the Clean Air Act. It describes a comprehensive plan of action for achieving specified air quality objectives and standards for a particular locality or region within a specified time, as enforced by the state and approved by the Environmental Protection Agency.

**Stream Order** - A hydrologic system of stream classification based on stream branching. Each small unbranched tributary is a first order stream. Two first order streams join to make a second order stream. Two second order streams join to form a third order stream and so forth.

**Structural Diversity** - Variety in a forest stand that results from layering or tiering of the canopy and the die-back, death, and ultimate decay of trees. In aquatic habitats, the presence of a variety of structural features (such as logs and boulders) that create a variety of habitat.

**Succession** - A series of dynamic changes by which one group of organisms succeeds another through stages leading to potential natural community or climax. An example is the development of a series of plant communities (called seral stages) following a major disturbance.

**Suitable Commercial Forest Land** - Commercial forest land capable of sustained long-term timber production.

**Suitable River** - A river segment found through administrative study by an appropriate agency to meet the criteria for designation as a component of the National Wild and Scenic Rivers system, as specified in Section 4(a) of the Wild and Scenic Rivers Act.

**Threatened Species** - Any species defined through the Endangered Species Act as likely to become endangered within the foreseeable future throughout all or a significant portion of its range and published in the Federal Register.

**Timber Management Plan** - An activity plan that specifically addresses procedures related to the offering and sale of timber volume consistent with the approved allowable sale quantity.

**Timber Production Capability Classification (TPCC)** - The process of partitioning forest land into major classes indicating relative suitability to produce timber on a sustained yield basis.

**Transportation System** - Network of roads used to manage BLM-administered lands. Includes BLM-controlled roads and some privately-controlled roads. Does not include Oregon Department of Transportation, county, and municipal roads.

**Treatable Water** - Water capable of being treated with commonly used filtration and chlorination systems.

**Uneven-aged Management** - A combination of actions that simultaneously maintains continuous tall forest cover, recurring regeneration of desirable species, and the orderly growth and development of trees through a range of diameter or age classes. Cutting methods that develop and maintain uneven-aged stands are single-tree selection and group selection.

**Unique Ecosystems** - Ecosystems embracing special habitat features such as beaches and dunes, talus slopes, meadows, and wetlands.

**Unnecessary or Undue Degradation** - Surface disturbance greater than what would normally result when an activity is being accomplished by a prudent operator in usual, customary, and proficient operations of similar character and taking into consideration the effects of operations on other resources and land uses, including those resources and uses outside the area of operation. Unnecessary and undue degradation may involve failure to initiate and complete reasonable mitigation measures—including reclamation of the disturbed area, creation of a nuisance, or failure to comply with applicable environmental protection statutes and regulations.



## Glossary

**Utility Corridor** - A linear strip of land identified for the present or future location of utility lines within its boundaries.

**Viable Population** - A wildlife or plant population that contains an adequate number of reproductive individuals to appropriately ensure the long-term existence of the species.

**Visual Resource Management (VRM)** - The inventory and planning actions to identify visual values and establish objectives for managing those values and the management actions to achieve visual management objectives.

**Visual Resource Management Classes** - Categories assigned to public lands based on scenic quality, sensitivity level, and distance zones. There are four classes. Each class has an objective that prescribes the amount of modification allowed in the landscape.

**Water Quality** - The chemical, physical, and biological characteristics of water.

**Wetlands or Wetland Habitat** - Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include—but are not limited to—swamps, marshes, bogs, and similar areas.

**Wet Meadows** - Areas where grasses predominate. Normally waterlogged within a few inches of the ground surface.

**Wild and Scenic River System** - A national system of rivers or river segments that have been designated by Congress and the President as part of the National Wild and Scenic Rivers System (Public Law 90-542, 1968). Each designated river is classified as one of the following:

**Wild River** - A river or section of a river free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted. Designated wild as part of the National Wild and Scenic Rivers System.

**Scenic River** - A river or section of a river free of impoundments, with shorelines or watersheds still largely primitive and undeveloped but accessible in places by roads. Designated scenic as part of the National Wild and Scenic Rivers System.

**Recreational River** - A river or section of a river that is readily accessible by road or railroad, may have some development along its shorelines, and may have undergone some impoundment or diversion in the past. Designated recreational as part of the National Wild and Scenic Rivers System.

**Wilderness Study Area (WSA)** - A roadless area that has been inventoried and found to be wilderness in character, has few human developments, and provides outstanding opportunities for solitude and primitive recreation, as described in Section 603 of the Federal Land Policy and Management Act and in Section 2(c) of the Wilderness Act of 1964.

**Wildlife Tree** - A live tree retained to become future snag habitat.

**Withdrawal** - A designation that restricts or closes public lands from the operation of land or mineral disposal laws.

**Woodland** - Forest land producing trees not typically used as saw timber products and not included in calculation of the commercial forest land ASQ.

**Yarding** - The act or process of moving logs to a landing.



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# Appendix A. Summary of Land Use Allocations and Management Actions/Direction

(Note: detailed management direction is described in the Resource Management Plan)

| Major Land Allocations                 | Acres <sup>1</sup> |
|----------------------------------------|--------------------|
| Congressional Reserves                 | 600                |
| Late-Successional Reserves             | 136,800            |
| District Defined Reserves <sup>2</sup> | 20,400             |
| Riparian Reserves                      | 89,600             |
| General Forest Management Area         | 55,300             |
| Connectivity/Diversity Blocks          | 6,600              |
| Total                                  | 309,300            |

<sup>1</sup> Allocations do not have any overlapping designations.

<sup>2</sup> District Defined Reserves include areas designated for Special Management Areas, Existing or Potential Recreation Sites/Areas, TPCC Unavailable Lands, and Threatened and Endangered Species Habitat.

| Water Quality and Riparian Zones | Acres   |
|----------------------------------|---------|
| Riparian Reserves <sup>3</sup>   | 203,200 |

<sup>3</sup> Riparian Reserves occur within all other land use allocations.

| Old-Growth and Mature Forest Habitat | Acres |
|--------------------------------------|-------|
|--------------------------------------|-------|

Management Decision:

Manage 43 percent of the land as Late-Successional Reserves and 2 percent as Connectivity/Diversity Blocks.

|                                                                                 |         |
|---------------------------------------------------------------------------------|---------|
| Areas managed for retention and development of older forest stands <sup>4</sup> | 247,400 |
| Areas managed for maintenance of older forest characteristics <sup>5</sup>      | 6,600   |
| Acres of older forest retained at the end of the decade <sup>6</sup>            | 114,000 |

<sup>4</sup> Includes Late-Successional Reserves, Riparian Reserves, and other lands not available for timber harvest.

<sup>5</sup> Connectivity/Diversity Blocks.

<sup>6</sup> Forest stands 100 years and older.

| Timber                                                          | Acres   |
|-----------------------------------------------------------------|---------|
| Forest Management Allocations (acres of commercial forest land) |         |
| General Forest Management Area, intensive management            | 55,300  |
| Connectivity/Diversity Blocks, restricted management            | 6,600   |
| Enhancement of Other Uses or Not Available                      | 247,400 |



**Timber (continued)****Acres****Practices (assumed average annual acres for first decade)**

|                                                |       |
|------------------------------------------------|-------|
| Regeneration Harvest                           | 580   |
| Commercial thinning/density management harvest | 610   |
| Site Preparation                               |       |
| Prescribed Fire                                | 760   |
| Other                                          | 100   |
| Stand Maintenance/Protection                   | 6,400 |
| Release/Precommercial thinning                 | 3,480 |
| Brushfield/Hardwood Conversion                 | 120   |
| Planting                                       |       |
| Regular Stock                                  | 220   |
| Genetically-selected Stock                     | 540   |
| Fertilization                                  | 1,200 |
| Pruning                                        | 870   |
| <hr/>                                          |       |
| New Road construction: (18.6 miles)            |       |
| New Road construction: (acres)                 | 100   |
| Allowable Sale Quantity <sup>7</sup> (MMCF)    | 5.3   |
| Allowable Sale Quantity <sup>7</sup> (MMBF)    | 32    |
| Miscellaneous volume <sup>8</sup> (MMCF)       | 0.8   |
| Miscellaneous volume <sup>8</sup> (MMBF)       | 5     |

<sup>7</sup> Based on coniferous volume only.<sup>8</sup> Volume harvested from Late-Successional Reservess, Riparian Reserves, District Defined Reserves, and hardwoods.

|                                                                                   |              |
|-----------------------------------------------------------------------------------|--------------|
| <b>Special Status Species Including Threatened and Endangered Species Habitat</b> | <b>Acres</b> |
|-----------------------------------------------------------------------------------|--------------|

Management Decision:

Manage habitats of Federal listed, Federal Candidate, State-listed, Bureau sensitive, and SEIS Special Attention Species on all BLM-administered lands.

|                                                        |         |
|--------------------------------------------------------|---------|
| Acres managed so as not to contribute to need to list. | 329,600 |
|--------------------------------------------------------|---------|



## Wildlife (including Fisheries) Habitat

|                                     |         |
|-------------------------------------|---------|
| Special habitat buffer width (feet) | 100-300 |
| Fish habitat improvement (miles)    | 40      |
| Forage seeding (acres/year)         | 290     |

## Special Areas

|                                               |       |
|-----------------------------------------------|-------|
| Retain Existing RNA/ACECs                     |       |
| Number                                        | 1     |
| Acres                                         | 570   |
| Retain Other Existing ACECs                   |       |
| Number                                        | 1     |
| Acres                                         | 880   |
| Designate New RNA/ACECs                       |       |
| Number                                        | 0     |
| Acres                                         | 0     |
| Designate Other new ACECs                     |       |
| Number                                        | 9     |
| Acres                                         | 7,950 |
| Retain Existing Environmental Education Areas |       |
| Number                                        | 1     |
| Acres                                         | 70    |
| Total RNA/ACECs                               |       |
| Number                                        | 1     |
| Acres                                         | 570   |
| Total Other RNA/ACECs                         |       |
| Number                                        | 10    |
| Acres                                         | 8,830 |

## Recreation Resource

|                                       |       |
|---------------------------------------|-------|
| Recreation Sites                      |       |
| Existing                              |       |
| Number of sites                       | 12    |
| Acres                                 | 1,655 |
| New                                   |       |
| Number of sites                       | 12    |
| Acres                                 | 410   |
| County Parks on BLM-administered land |       |
| Recreation Sites                      |       |
| Number of sites                       | 6     |
| Acres                                 | 650   |



## Recreation (continued)

### Trails Maintained

#### Existing

Number of trails

4

Miles

4

#### New

Number of trails

8

Miles

38-52

### Special Recreation Management Areas

#### Existing

Number of sites

4

Acres

3,700

#### New

Number of sites

3

Acres

25,700

### Back Country Byways

Number of roads

5

Miles of road

155

Acres open to OHV use

80

Acres OHV limited to Designated Roads and Trails

326,600

Acres closed to OHV use

3,000

Miles of Road Open

830-1,360

Miles of Road Closed

205-735

## Wild and Scenic Rivers

River segments found suitable for designation as:

#### Recreational

Number of segments

0

Miles

0

#### Scenic

Number of segments

0

Miles

0

#### Wild

Number of segments

0

Miles

0

## Visual Resources

Management Decision:

Manage Congressionally designated areas as VRM Class I. Manage available forest land as inventoried within 0.25 mile of recreation sites, and state and federal highways. Manage other available forest land as VRM Class IV. Manage all other land as inventoried.



**Visual Resources (continued)**

|                         |         |
|-------------------------|---------|
| Manage as VRM Class I   | 600     |
| Manage as VRM Class II  | 6,600   |
| Manage as VRM Class III | 14,700  |
| Manage as VRM Class IV  | 307,700 |

**Land Tenure****Acres**

Management Decision:

Make exchanges within zones 2 and 3 that would enhance management opportunities to benefit one or more resource values. Sell PD lands and O&C or CBWR lands in zone 3 that meet criteria of FLPMA Section 203(a). Consider R&PP leases to provide public facilities or services.

|                                                    |         |
|----------------------------------------------------|---------|
| Identified for retention (Zone 1)                  | 4,600   |
| Potentially eligible for exchange only (Zone 2)    | 324,000 |
| Potentially eligible for sale or exchange (Zone 3) | 1,100   |

**Rights-of-Way****Acres**

|                              |         |
|------------------------------|---------|
| Right-of-Way Avoidance Areas | 146,700 |
| Right-of-Way Exclusion Areas | 600     |

**Energy and Minerals Management****Acres**

|                                                  |         |
|--------------------------------------------------|---------|
| Available for oil and gas and geothermal leasing | 328,000 |
| Closed to oil and gas and geothermal leasing     | 1,600   |
| Open to mining claim location and operation      | 317,100 |
| Closed to mining location                        | 12,500  |
| Open to saleable mineral development             | 311,900 |
| Closed to saleable mineral development           | 15,300  |

**Rural Interface Management****Acres**

|                                                                                 |       |
|---------------------------------------------------------------------------------|-------|
| Areas considered for alternative management practices                           | 2,100 |
| Areas where clearcutting, aerial herbicide, and prescribed burning are excluded | 0     |
| Areas managed for VRM Class II objectives                                       | 0     |
| Areas managed for VRM Class III objectives                                      | 2,100 |







# **Appendix B. Record of Decision for *Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl***

## **Standards and Guidelines for *Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl***

This appendix consists of the Record of Decision and its Attachment A, published in April 1994, for the *Final Supplemental Environmental Impact Statement on Management of Habitat for Late-Successional and Old-Growth Forest Related Species Within the Range of the Northern Spotted Owl*. It is referred to in this Record of Decision as the SEIS ROD.

The SEIS ROD is bound separately from the Record of Decision and is incorporated by reference. The Draft and Final SEIS and the SEIS ROD were sent to those who received copies of the *Draft Coos Bay District Resource Management Plan and Environmental Impact Statement*, and to agencies, libraries, and others who requested it. The document is available upon request.

To obtain a copy of the *Record of Decision for Amendments to Forest Service and Bureau of Land Management Planning Documents Within the Range of the Northern Spotted Owl*, send a request in writing to:

Regional Ecosystem Office  
P.O. Box 3623  
Portland, OR 97208-3623







# Appendix C. Special Status Species

**Table C-1. Management For SEIS Special Attention Species**

|                                   | 1 | Survey Strategies <sup>1</sup> |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|-----------------------------------|---|--------------------------------|---|---|-----|-----------------------------------------|
| 2                                 | 3 | 4                              | 5 | 6 | 7   | 8                                       |
| <b>Fungi</b>                      |   |                                |   |   |     |                                         |
| <b>Mycorrhizal Fungi</b>          |   |                                |   |   |     |                                         |
| <b>Boletes</b>                    |   |                                |   |   |     |                                         |
| <i>Gastroboletus subalpinus</i>   | x |                                | x |   |     |                                         |
| <i>Gastroboletus turbinatus</i>   |   |                                | x |   | S   |                                         |
| <b>Boletes, low elevation</b>     |   |                                |   |   |     |                                         |
| <i>Boletus piperatus</i>          |   |                                | x |   | S   |                                         |
| <i>Tylopilus pseudoscaber</i>     | x |                                | x |   | S   |                                         |
| <b>Rare Boletes</b>               |   |                                |   |   |     |                                         |
| <i>Boletus haematinus</i>         | x |                                | x |   |     |                                         |
| <i>Boletus pulcherrimus</i>       | x |                                | x |   | S   |                                         |
| <i>Gastroboletus imbellus</i>     | x |                                | x |   |     |                                         |
| <i>Gastroboletus ruber</i>        | x |                                | x |   |     |                                         |
| <b>False Truffles</b>             |   |                                |   |   |     |                                         |
| <i>Nivatogastrium nubigenum</i>   | x |                                | x |   | S   |                                         |
| <i>Rhizopogon abietis</i>         |   |                                | x |   |     |                                         |
| <i>Rhizopogon atroviolaceus</i>   |   |                                | x |   |     |                                         |
| <i>Rhizopogon truncatus</i>       |   |                                | x |   | S   |                                         |
| <i>Thaxterogaster pingue</i>      |   |                                | x |   |     |                                         |
| <b>Uncommon False Truffle</b>     |   |                                |   |   |     |                                         |
| <i>Macowanites chlorinosmus</i>   | x |                                | x |   | S   |                                         |
| <b>Rare False Truffles</b>        |   |                                |   |   |     |                                         |
| <i>Alpova alexsmithii</i>         | x |                                | x |   |     |                                         |
| <i>Alpova olivaceotinctus</i>     | x |                                | x |   |     |                                         |
| <i>Arcangeliella crassa</i>       | x |                                | x |   |     |                                         |
| <i>Arcangeliella lactarioides</i> | x |                                | x |   |     |                                         |
| <i>Destuntzia fusca</i>           | x |                                | x |   | S   |                                         |
| <i>Destuntzia rubra</i>           | x |                                | x |   | S   |                                         |
| <i>Gautteria magnicellaris</i>    | x |                                | x |   |     |                                         |
| <i>Gautieria otthii</i>           | x |                                | x |   |     |                                         |
| <i>Leucogaster citrinus</i>       | x |                                | x |   | S   |                                         |
| <i>Leucogaster microsporus</i>    | x |                                | x |   |     |                                         |
| <i>Macowanites lymanensis</i>     | x |                                | x |   |     |                                         |
| <i>Macowanites mollis</i>         | x |                                | x |   | S   |                                         |
| <i>Martellia fragrans</i>         | x |                                | x |   |     |                                         |
| <i>Martellia idahoensis</i>       | x |                                | x |   | S   |                                         |
| <i>Martellia monticola</i>        | x |                                | x |   |     |                                         |
| <i>Octavianina macrospora</i>     | x |                                | x |   | S   |                                         |
| <i>Octavianina papyracea</i>      | x |                                | x |   | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                                     | Survey Strategies <sup>1</sup> |   |   |   | Require Protection Buffers <sup>2</sup> |
|---------------------------------------------------------------------|--------------------------------|---|---|---|-----------------------------------------|
|                                                                     | 1                              | 2 | 3 | 4 |                                         |
| <i>Rhizopogon brunneiniger</i>                                      | x                              |   | x |   | S                                       |
| <i>Rhizopogon evadens</i> var. <i>subalpinus</i>                    | x                              |   | x |   | S                                       |
| <i>Rhizopogon exiguus</i>                                           | x                              |   | x |   | S                                       |
| <i>Rhizopogon flavofibrillosus</i>                                  | x                              |   | x |   | S                                       |
| <i>Rhizopogon inquinatus</i>                                        | x                              |   | x |   | S                                       |
| <i>Sedecula pulvinata</i>                                           | x                              |   | x |   | S                                       |
| <b>Undescribed Taxa, Rare Truffles &amp; False Truffles</b>         |                                |   |   |   |                                         |
| <i>Alpova</i> sp. nov. #Trappe 9730                                 | x                              |   | x |   | S                                       |
| <i>Alpova</i> sp. nov. #Trappe 1966                                 | x                              |   | x |   | S                                       |
| <i>Arcangeliella</i> sp. nov. #Trappe 12382                         | x                              |   | x |   | S                                       |
| <i>Arcangeliella</i> sp. nov. #Trappe 12359                         | x                              |   | x |   | S                                       |
| <i>Chamonixia pacifica</i> sp. nov. #Trappe 12768                   | x                              |   | x |   | S                                       |
| <i>Elaphomyces</i> sp. nov. #Trappe 1038                            | x                              |   | x |   | S                                       |
| <i>Gastroboletus</i> sp. nov. #Trappe 2897                          | x                              |   | x |   | S                                       |
| <i>Gastroboletus</i> sp. nov. #Trappe 7515                          | x                              |   | x |   |                                         |
| <i>Gastrosuillus</i> sp. nov. #Trappe 7516                          | x                              |   | x |   |                                         |
| <i>Gastrosuillus</i> sp. nov. #Trappe 9608                          | x                              |   | x |   |                                         |
| <i>Gymnomyces</i> sp. nov. #Trappe 4703, 5576                       | x                              |   | x |   |                                         |
| <i>Gymnomyces</i> sp. nov. #Trappe 5052                             | x                              |   | x |   |                                         |
| <i>Gymnomyces</i> sp. nov. #Trappe 1690, 1706, 1710                 | x                              |   | x |   |                                         |
| <i>Gymnomyces</i> sp. nov. #Trappe 7545                             | x                              |   | x |   |                                         |
| <i>Hydnotrya</i> sp. nov. #Trappe 787, 792                          | x                              |   | x |   |                                         |
| <i>Hydnotrya subnix</i> sp. nov. #Trappe 1861                       | x                              |   | x |   |                                         |
| <i>Martellia</i> sp. nov. #Trappe 649                               | x                              |   | x |   |                                         |
| <i>Martellia</i> sp. nov. #Trappe 1700                              | x                              |   | x |   |                                         |
| <i>Martellia</i> sp. nov. #Trappe 311                               | x                              |   | x |   |                                         |
| <i>Martellia</i> sp. nov. #Trappe 5903                              | x                              |   | x |   |                                         |
| <i>Octavianina</i> sp. nov. #Trappe 7502                            | x                              |   | x |   |                                         |
| <i>Rhizopogon</i> sp. nov. #Trappe 9432                             | x                              |   | x |   | S                                       |
| <i>Rhizopogon</i> sp. nov. #Trappe 1692                             | x                              |   | x |   |                                         |
| <i>Rhizopogon</i> sp. nov. #Trappe 1698                             | x                              |   | x |   |                                         |
| <i>Thaxterogaster</i> sp. nov. #Trappe 4867, 6242, 7427, 7962, 8520 | x                              |   | x |   | S                                       |
| <i>Tuber</i> sp. nov. #Trappe 2302                                  | x                              |   | x |   | S                                       |
| <i>Tuber</i> sp. nov. #Trappe 12493                                 | x                              |   | x |   | S                                       |
| <b>Rare Truffles</b>                                                |                                |   |   |   |                                         |
| <i>Balsamia nigra</i>                                               | x                              |   | x |   | S                                       |
| <i>Choiromyces alveolatus</i>                                       | x                              |   | x |   |                                         |
| <i>Choiromyces venosus</i>                                          | x                              |   | x |   | S                                       |
| <i>Elaphomyces anthracinus</i>                                      | x                              |   | x |   |                                         |
| <i>Elaphomyces subviscidus</i>                                      | x                              |   | x |   | S                                       |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                     | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|-----------------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                                     | 1                              | 2 | 3 | 4 |     |                                         |
| <b>Chanterelles</b>                                 |                                |   |   |   |     |                                         |
| <i>Cantharellus cibarius</i>                        |                                |   | x | x | K   |                                         |
| <i>Cantharellus subalbidus</i>                      |                                |   | x | x | K   |                                         |
| <i>Cantharellus tubaeformis</i>                     |                                |   | x | x | S   |                                         |
| <b>Chanterelles - Gomphus</b>                       |                                |   |   |   |     |                                         |
| <i>Gomphus bonarii</i>                              |                                |   | x |   | S   |                                         |
| <i>Gomphus clavatus</i>                             |                                |   | x |   | K   |                                         |
| <i>Gomphus floccosus</i>                            |                                |   | x |   | K   |                                         |
| <i>Gomphus kauffmanii</i>                           |                                |   | x |   | S   |                                         |
| <b>Rare Chanterelles</b>                            |                                |   |   |   |     |                                         |
| <i>Cantharellus formosus</i>                        | x                              |   | x |   | S   |                                         |
| <i>Polyozellus multiplex</i>                        | x                              |   | x |   |     |                                         |
| <b>Uncommon Coral Fungi</b>                         |                                |   |   |   |     |                                         |
| <i>Ramaria abietina</i>                             |                                |   | x |   | S   |                                         |
| <i>Ramaria araiospora</i>                           | x                              |   | x |   | S   |                                         |
| <i>Ramaria botryis</i> var. <i>aurantiiramosa</i>   | x                              |   | x |   | S   |                                         |
| <i>Ramaria concolor</i> f. <i>tsugina</i>           |                                |   | x |   | S   |                                         |
| <i>Ramaria coulterae</i>                            |                                |   | x |   | S   |                                         |
| <i>Ramaria fasciculata</i> var. <i>sparsiramosa</i> | x                              |   | x |   | S   |                                         |
| <i>Ramaria gelatiniaurantia</i>                     | x                              |   | x |   | S   |                                         |
| <i>Ramaria lagentii</i>                             | x                              |   | x |   | S   |                                         |
| <i>Ramaria rubella</i> var. <i>blanda</i>           | x                              |   | x |   | S   |                                         |
| <i>Ramaria rubrievanescens</i>                      | x                              |   | x |   | S   |                                         |
| <i>Ramaria rubripermanens</i>                       | x                              |   | x |   |     |                                         |
| <i>Ramaria suecica</i>                              |                                |   | x |   | S   |                                         |
| <i>Ramaria thiersii</i>                             | x                              |   | x |   | S   |                                         |
| <b>Rare Coral Fungi</b>                             |                                |   |   |   |     |                                         |
| <i>Ramaria amyloidea</i>                            | x                              |   | x |   | S   |                                         |
| <i>Ramaria aurantiisiccescens</i>                   | x                              |   | x |   | S   |                                         |
| <i>Ramaria celerivirescens</i>                      | x                              |   | x |   | S   |                                         |
| <i>Ramaria claviramulata</i>                        | x                              |   | x |   | S   |                                         |
| <i>Ramaria concolor</i> f. <i>marri</i>             | x                              |   | x |   | S   |                                         |
| <i>Ramaria cyaneigranosa</i>                        | x                              |   | x |   | S   |                                         |
| <i>Ramaria hilaris</i> var. <i>olympiana</i>        | x                              |   | x |   | S   |                                         |
| <i>Ramaria lorithamnus</i>                          | x                              |   | x |   | S   |                                         |
| <i>Ramaria maculatipes</i>                          | x                              |   | x |   | S   |                                         |
| <i>Ramaria rainierensis</i>                         | x                              |   | x |   | S   |                                         |
| <i>Ramaria rubribrunnescens</i>                     | x                              |   | x |   | S   |                                         |
| <i>Ramaria stuntzii</i>                             | x                              |   | x |   | S   |                                         |
| <i>Ramaria verlotensis</i>                          | x                              |   | x |   | S   |                                         |
| <i>Ramaria gracilis</i>                             | x                              |   | x |   | S   |                                         |
| <i>Ramaria spinulosa</i>                            | x                              |   | x |   | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                    | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                    | 1                              | 2 | 3 | 4 |     |                                         |
| <b>Phaeocollybia</b>               |                                |   |   |   |     |                                         |
| <i>Phaeocollybia attenuate</i>     |                                |   | X |   | S   |                                         |
| <i>Phaeocollybia californica</i>   | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia carmanahensis</i> | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia dissiliens</i>    | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia fallax</i>        |                                |   | X |   | S   |                                         |
| <i>Phaeocollybia gregaria</i>      | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia kauffmanii</i>    | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia olivacea</i>      |                                |   | X |   | S   |                                         |
| <i>Phaeocollybia oregonensis</i>   | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia piceae</i>        | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia pseudofestiva</i> |                                |   | X |   | S   |                                         |
| <i>Phaeocollybia scatesiae</i>     | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia sipei</i>         | X                              |   | X |   | S   |                                         |
| <i>Phaeocollybia spadicea</i>      |                                |   | X |   | S   |                                         |
| <b>Uncommon Gilled Mushrooms</b>   |                                |   |   |   |     |                                         |
| <i>Catathelasma ventricosa</i>     |                                |   | X |   | S   |                                         |
| <i>Cortinarius azureus</i>         |                                |   | X |   | S   |                                         |
| <i>Cortinarius boulderensis</i>    | X                              |   | X |   | S   |                                         |
| <i>Cortinarius cyanites</i>        |                                |   | X |   | S   |                                         |
| <i>Cortinarius magnivelatus</i>    | X                              |   | X |   | S   |                                         |
| <i>Cortinarius olympianus</i>      | X                              |   | X |   | S   |                                         |
| <i>Cortinarius spilomius</i>       |                                |   | X |   | S   |                                         |
| <i>Cortinarius tabularis</i>       |                                |   | X |   | S   |                                         |
| <i>Cortinarius valgus</i>          |                                |   | X |   | S   |                                         |
| <i>Dermocybe humboldtensis</i>     | X                              |   | X |   | S   |                                         |
| <i>Hebeloma olympiana</i>          | X                              |   | X |   | S   |                                         |
| <i>Hygrophorus caeruleus</i>       | X                              |   | X |   | S   |                                         |
| <i>Hygrophorus karstenii</i>       |                                |   | X |   | S   |                                         |
| <i>Hygrophorus vernalis</i>        | X                              |   | X |   | S   |                                         |
| <i>Russula mustelina</i>           |                                |   | X |   | S   |                                         |
| <b>Rare Gilled Mushrooms</b>       |                                |   |   |   |     |                                         |
| <i>Chroogomphus loculatus</i>      | X                              |   | X |   | S   |                                         |
| <i>Cortinarius canabarda</i>       | X                              |   | X |   | S   |                                         |
| <i>Cortinarius rainierensis</i>    | X                              |   | X |   | S   |                                         |
| <i>Cortinarius variipes</i>        | X                              |   | X |   | S   |                                         |
| <i>Cortinarius verrucisporus</i>   | X                              |   | X |   | S   |                                         |
| <i>Cortinarius wiebeae</i>         | X                              |   | X |   | S   |                                         |
| <i>Tricholoma venenatum</i>        | X                              |   | X |   | S   |                                         |
| <b>Uncommon Ecto-Polypores</b>     |                                |   |   |   |     |                                         |
| <i>Albatrellus ellisii</i>         |                                |   | X |   | S   |                                         |
| <i>Albatrellus flettii</i>         |                                |   | X |   | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                             | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|---------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                             | 1                              | 2 | 3 | 4 |     |                                         |
| <b>Rare Ecto-Polypores</b>                  |                                |   |   |   |     |                                         |
| <i>Albatrellus avellaneus</i>               | x                              |   | x |   | S   |                                         |
| <i>Albatrellus caeruleoporus</i>            | x                              |   | x |   | S   |                                         |
| <b>Tooth Fungi</b>                          |                                |   |   |   |     |                                         |
| <i>Hydnum repandum</i>                      |                                |   | x |   | K   |                                         |
| <i>Hydnum umbilicatum</i>                   |                                |   | x |   | S   |                                         |
| <i>Phellodon atratum</i>                    |                                |   | x |   | S   |                                         |
| <i>Sarcodon fuscoindicum</i>                |                                |   | x |   | S   |                                         |
| <i>Sarcodon imbricatus</i>                  |                                |   | x |   | S   |                                         |
| <b>Rare Zygomycetes</b>                     |                                |   |   |   |     |                                         |
| <i>Endogone acrogena</i>                    | x                              |   | x |   | S   |                                         |
| <i>Endogone oregonensis</i>                 | x                              |   | x |   | S   |                                         |
| <i>Glomus radiatum</i>                      | x                              |   | x |   | S   |                                         |
| <b>Saprobies (Decomposers)</b>              |                                |   |   |   |     |                                         |
| <b>Uncommon Gilled Mushrooms</b>            |                                |   |   |   |     |                                         |
| <i>Baeospora myriadophylla</i>              |                                |   | x |   | S   |                                         |
| <i>Chrysomphalina grossula</i>              |                                |   | x |   | S   |                                         |
| <i>Collybia bakerensis</i>                  | x                              |   | x |   | S   |                                         |
| <i>Fayodia gracilipes (rainierensis)</i>    |                                |   | x |   | S   |                                         |
| <i>Gymnopilus punctifolius</i>              | x                              |   | x |   | S   |                                         |
| <i>Marasmius applanatipes</i>               | x                              |   | x |   | S   |                                         |
| <i>Mycena hudsoniana</i>                    | x                              |   | x |   | S   |                                         |
| <i>Mycena lilacifolia</i>                   |                                |   | x |   | S   |                                         |
| <i>Mycena marginella</i>                    |                                |   | x |   | S   |                                         |
| <i>Mycena monticola</i>                     | x                              |   | x |   | S   |                                         |
| <i>Mycena overholtsii</i>                   | x                              |   | x |   | S   |                                         |
| <i>Mycena quinaultensis</i>                 | x                              |   | x |   | S   |                                         |
| <i>Mycena tenax</i>                         |                                |   | x |   | S   |                                         |
| <i>Mythicomyces corneipes</i>               |                                |   | x |   | S   |                                         |
| <i>Neolentinus kauffmanii</i>               | x                              |   | x |   | S   |                                         |
| <i>Pholiota albivelata</i>                  | x                              |   | x |   | S   |                                         |
| <i>Stagnicola perplexa</i>                  |                                |   | x |   | S   |                                         |
| <b>Rare Gilled Mushrooms</b>                |                                |   |   |   |     |                                         |
| <i>Clitocybe subditopoda</i>                | x                              |   | x |   | S   |                                         |
| <i>Clitocybe senilis</i>                    | x                              |   | x |   | S   |                                         |
| <i>Neolentinus adherens</i>                 | x                              |   | x |   | S   |                                         |
| <i>Rhodocybe nitida</i>                     | x                              |   | x |   | S   |                                         |
| <i>Rhodocybe speciosa</i>                   | x                              |   | x |   | S   |                                         |
| <i>Tricholomopsis fulvescens</i>            | x                              |   | x |   | S   |                                         |
| <b>Noble Polypore (rare and endangered)</b> |                                |   |   |   |     |                                         |
| <i>Oxyporus nobilissimus</i>                | x                              | x | x |   |     |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                  | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|--------------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                                  | 1                              | 2 | 3 | 4 |     |                                         |
| <b>Bondarzewia Polypore</b>                      |                                |   |   |   |     |                                         |
| <i>Bondarzewia montana</i>                       | x                              | x | x |   |     |                                         |
| <b>Rare Resupinates and Polypores</b>            |                                |   |   |   |     |                                         |
| <i>Aleurodiscus farlowii</i>                     | x                              |   | x |   | S   |                                         |
| <i>Dichostereum granulatum</i>                   | x                              |   | x |   | S   |                                         |
| <i>Cudonia monticola</i>                         |                                |   | x |   | S   |                                         |
| <i>Gyromitra californica</i>                     |                                |   | x | x | S   |                                         |
| <i>Gyromitra esculenta</i>                       |                                |   | x | x | S   |                                         |
| <i>Gyromitra infula</i>                          |                                |   | x | x | S   |                                         |
| <i>Gyromitra melaleucoides</i>                   |                                |   | x | x |     |                                         |
| <i>Gyromitra montana</i> (syn. <i>G. gigas</i> ) |                                |   | x | x |     |                                         |
| <i>Otidea leporina</i>                           | x                              |   | x |   | K   | Y                                       |
| <i>Otidea onotica</i>                            | x                              |   | x |   | S   | Y                                       |
| <i>Otidea smithii</i>                            | x                              |   | x |   | S   | Y                                       |
| <i>Plectania melastoma</i>                       |                                |   | x |   | S   |                                         |
| <i>Podostroma alutaceum</i>                      |                                |   | x |   | S   |                                         |
| <i>Sarcosoma mexicana</i>                        |                                |   | x |   | S   | Y                                       |
| <i>Sarcosphaera eximia</i>                       |                                |   | x |   | S   |                                         |
| <i>Spathularia flavida</i>                       |                                |   | x |   |     |                                         |
| <b>Rare Cup Fungi</b>                            |                                |   |   |   |     |                                         |
| <i>Aleuria rhenana</i>                           | x                              |   | x |   | S   | Y                                       |
| <i>Bryoglossum gracile</i>                       | x                              |   | x |   | S   |                                         |
| <i>Gelatinodiscus flavidus</i>                   | x                              |   | x |   | S   |                                         |
| <i>Helvella compressa</i>                        | x                              |   | x |   | S   |                                         |
| <i>Helvella crassitunicata</i>                   | x                              |   | x |   | S   |                                         |
| <i>Helvella elastica</i>                         | x                              |   | x |   | S   |                                         |
| <i>Helvella maculata</i>                         | x                              |   | x |   | S   |                                         |
| <i>Neourula pouchetii</i>                        | x                              |   | x |   | S   |                                         |
| <i>Pithya vulgaris</i>                           | x                              |   | x |   | S   |                                         |
| <i>Plectania latahensis</i>                      | x                              |   | x |   | S   |                                         |
| <i>Plectania milleri</i>                         | x                              |   | x |   | S   |                                         |
| <i>Pseudaleuria quinaultiana</i>                 | x                              |   | x |   | S   |                                         |
| <b>Club Coral Fungi</b>                          |                                |   |   |   |     |                                         |
| <i>Clavariadelphus ligula</i>                    |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus pistillaris</i>               |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus truncatus</i>                 |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus borealis</i>                  |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus lovejoyae</i>                 |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus sachalinensis</i>             |                                |   | x | x | S   |                                         |
| <i>Clavariadelphus subfastigiatus</i>            |                                |   | x | x | S   |                                         |
| <b>Jelly Mushroom</b>                            |                                |   |   |   |     |                                         |
| <i>Phlogitis helvelloides</i>                    |                                |   | x | x | S   |                                         |
| <b>Branched Coral Fungi</b>                      |                                |   |   |   |     |                                         |
| <i>Clavulina cinerea</i>                         |                                |   | x | x | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                       | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|---------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                       | 1                              | 2 | 3 | 4 |     |                                         |
| <i>Clavulina cristata</i>             |                                |   | x | x | S   |                                         |
| <i>Clavulina ornatipes</i>            |                                |   | x | x | S   |                                         |
| <b>Mushroom Lichen</b>                |                                |   |   |   |     |                                         |
| <i>Phytoconis ericetorum</i>          |                                |   | x | x | S   |                                         |
| <b>Parasitic Fungi</b>                |                                |   |   |   |     |                                         |
| <i>Asterophora lycoperdoides</i>      |                                |   | x |   | S   |                                         |
| <i>Asterophora parasitica</i>         |                                |   | x |   | S   |                                         |
| <i>Collybia racemosa</i>              |                                |   | x |   | S   |                                         |
| <i>Cordyceps capitata</i>             |                                |   | x |   | S   |                                         |
| <i>Cordyceps ophioglossoides</i>      |                                |   | x |   | S   |                                         |
| <i>Hypomyces luteovirens</i>          |                                |   | x |   | S   |                                         |
| <b>Cauliflower Mushroom</b>           |                                |   |   |   |     |                                         |
| <i>Sparassis crispa</i>               |                                |   | x |   | K   |                                         |
| <b>Moss Dwelling Mushrooms</b>        |                                |   |   |   |     |                                         |
| <i>Cyphellostereum laeve</i>          |                                |   | x |   | S   |                                         |
| <i>Galerina atkinsoniana</i>          |                                |   | x |   | S   |                                         |
| <i>Galerina cerina</i>                |                                |   | x |   | S   |                                         |
| <i>Galerina heterocystis</i>          |                                |   | x |   | S   |                                         |
| <i>Galerina sphagnicola</i>           |                                |   | x |   | S   |                                         |
| <i>Galerina vittaeformis</i>          |                                |   | x |   | S   |                                         |
| <i>Rickenella setipes</i>             |                                |   | x |   | S   |                                         |
| <b>Coral Fungi</b>                    |                                |   |   |   |     |                                         |
| <i>Clavicornia avellanea</i>          |                                |   | x |   | S   |                                         |
| <b>Lichens</b>                        |                                |   |   |   |     |                                         |
| <b>Rare Forage Lichen</b>             |                                |   |   |   |     |                                         |
| <i>Bryoria tortuosa</i>               | x                              |   | x |   | S   |                                         |
| <b>Rare Leafy (arboreal) Lichens</b>  |                                |   |   |   |     |                                         |
| <i>Hypogymnia duplicata</i>           | x                              | x | x |   | S   |                                         |
| <i>Tholurna dissimilis</i>            | x                              |   | x |   |     |                                         |
| <b>Rare Nitrogen-fixing Lichens</b>   |                                |   |   |   |     |                                         |
| <i>Dendroscocaulon intricatum</i>     | x                              |   | x |   | S   |                                         |
| <i>Lobaria hallii</i>                 | x                              |   | x |   | S   |                                         |
| <i>Lobaria linita</i>                 | x                              | x | x |   | S   |                                         |
| <i>Nephroma occulta</i>               | x                              |   | x |   | S   |                                         |
| <i>Pannaria rubiginosa</i>            | x                              |   | x |   | S   |                                         |
| <i>Pseudocyphellaria rainierensis</i> | x                              | x | x |   | S   |                                         |
| <b>Nitrogen-fixing Lichens</b>        |                                |   |   |   |     |                                         |
| <i>Lobaria oregano</i>                |                                |   |   | x | K   |                                         |
| <i>Lobaria pulmonaria</i>             |                                |   |   | x | K   |                                         |
| <i>Lobaria scrobiculata</i>           |                                |   |   | x | K   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                 | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|-------------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                                 | 1                              | 2 | 3 | 4 |     |                                         |
| <i>Nephroma bellum</i>                          |                                |   |   | x | K   |                                         |
| <i>Nephroma helveticum</i>                      |                                |   |   | x | K   |                                         |
| <i>Nephroma laevigatum</i>                      |                                |   |   | x | S   |                                         |
| <i>Nephroma parile</i>                          |                                |   |   | x | S   |                                         |
| <i>Nephroma resupinatum</i>                     |                                |   |   | x | K   |                                         |
| <i>Pannaria leucostictoides</i>                 |                                |   |   | x | S   |                                         |
| <i>Pannaria mediterranea</i>                    |                                |   |   | x | S   |                                         |
| <i>Pannaria saubinetii</i>                      |                                |   |   | x | S   |                                         |
| <i>Peltigera collina</i>                        |                                |   |   | x | S   |                                         |
| <i>Peltigera neckeri</i>                        |                                |   |   | x | S   |                                         |
| <i>Peltigera pacifica</i>                       |                                |   |   | x | S   |                                         |
| <i>Pseudocyphellaria anomala</i>                |                                |   |   | x | K   |                                         |
| <i>Pseudocyphellaria anthraxis</i>              |                                |   |   | x | K   |                                         |
| <i>Pseudocyphellaria crocata</i>                |                                |   |   | x | K   |                                         |
| <i>Sticta beauvoisii</i>                        |                                |   |   | x | S   |                                         |
| <i>Sticta fuliginosa</i>                        |                                |   |   | x | S   |                                         |
| <i>Sticta limbata</i>                           |                                |   |   | x | S   |                                         |
| <b>Pin Lichens</b>                              |                                |   |   |   |     |                                         |
| <i>Calicium abietinum</i>                       |                                |   |   | x | S   |                                         |
| <i>Calicium adaequatum</i>                      |                                |   |   | x | S   |                                         |
| <i>Calicium adspersum</i>                       |                                |   |   | x | S   |                                         |
| <i>Calicium glaucellum</i>                      |                                |   |   | x | S   |                                         |
| <i>Calicium viride</i>                          |                                |   |   | x | S   |                                         |
| <i>Chaenotheca brunneola</i>                    |                                |   |   | x | S   |                                         |
| <i>Chaenotheca chrysocephala</i>                |                                |   |   | x | S   |                                         |
| <i>Chaenotheca ferruginea</i>                   |                                |   |   | x | S   |                                         |
| <i>Chaenotheca furfuracea</i>                   |                                |   |   | x | S   |                                         |
| <i>Chaenotheca subroscida</i>                   |                                |   |   | x | S   |                                         |
| <i>Chaenothecopsis pusilla</i>                  |                                |   |   | x | S   |                                         |
| <i>Cyphelium inquinans</i>                      |                                |   |   | x | S   |                                         |
| <i>Microcalicium arenarium</i>                  |                                |   |   | x | S   |                                         |
| <i>Mycocalicium subtile</i>                     |                                |   |   | x | S   |                                         |
| <i>Stenocybe clavata</i>                        |                                |   |   | x | S   |                                         |
| <i>Stenocybe major</i>                          |                                |   |   | x | S   |                                         |
| <b>Rare Rock Lichens</b>                        |                                |   |   |   |     |                                         |
| <i>Pilophorus nigricaulis</i>                   | x                              |   | x |   | S   |                                         |
| <i>Sticta arctica</i>                           | x                              |   | x |   | S   |                                         |
| <b>Riparian Lichens</b>                         |                                |   |   |   |     |                                         |
| <i>Cetrelia cetrarioides</i>                    |                                |   |   | x | S   |                                         |
| <i>Collema nigrescens</i>                       |                                |   |   | x | S   |                                         |
| <i>Leptogium burnetiae</i> var. <i>hirsutum</i> |                                |   |   | x | S   |                                         |
| <i>Leptogium cyanescens</i>                     |                                |   |   | x | S   |                                         |
| <i>Leptogium saturninum</i>                     |                                |   |   | x | S   |                                         |
| <i>Leptogium teretiusculum</i>                  |                                |   |   | x | S   |                                         |
| <i>Platisnwtia lacunosa</i>                     |                                |   |   | x | S   |                                         |
| <i>Ramalina thrausta</i>                        |                                |   |   | x | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                            | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|------------------------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                                            | 1                              | 2 | 3 | 4 |     |                                         |
| <i>Usnea longissima</i>                                    |                                |   |   | x | K   |                                         |
| <b>Aquatic Lichens</b>                                     |                                |   |   |   |     |                                         |
| <i>Dermatocarpon luridum</i>                               | x                              |   | x |   | S   |                                         |
| <i>Hydrothyria venosa</i>                                  | x                              |   | x |   | S   |                                         |
| <i>Leptogium rivale</i>                                    | x                              |   | x |   | S   |                                         |
| <b>Rare Oceanic Influenced Lichens</b>                     |                                |   |   |   |     |                                         |
| <i>Bryoria pseudocapillaris</i>                            | x                              |   | x |   | K   |                                         |
| <i>Bryoria spiralifera</i>                                 | x                              |   | x |   | S   |                                         |
| <i>Bryoria subcana</i>                                     | x                              |   | x |   | S   |                                         |
| <i>Buellia oidealea</i>                                    | x                              |   | x |   | S   |                                         |
| <i>Erioderma soledatum</i>                                 | x                              |   | x |   | S   |                                         |
| <i>Hypogymnia oceanica</i>                                 | x                              |   | x |   | S   |                                         |
| <i>Leioderma soledatum</i>                                 | x                              |   | x |   | S   |                                         |
| <i>Leptogium brebissonii</i>                               | x                              |   | x |   | S   |                                         |
| <i>Niebla cephalota</i>                                    | x                              |   | x |   | K   |                                         |
| <i>Pseudocyphellaria mougeotiana</i>                       | x                              |   | x |   | S   |                                         |
| <i>Teloschistes flavicans</i>                              | x                              |   | x |   | K   |                                         |
| <i>Usnea hesperina</i>                                     | x                              |   | x |   | S   |                                         |
| <b>Oceanic Influenced Lichens</b>                          |                                |   |   |   |     |                                         |
| <i>Cetraria californica</i>                                | x                              |   | x |   | S   |                                         |
| <i>Heterodermia leucomelos</i>                             | x                              |   | x |   | S   |                                         |
| <i>Loxospora</i> sp. nov. "corallifera"<br>(Brodo in edit) | x                              |   | x |   | S   |                                         |
| <i>Pyrrhospora quernea</i>                                 | x                              |   | x |   | S   |                                         |
| <b>Additional Lichen Species</b>                           |                                |   |   |   |     |                                         |
| <i>Cladonia norvegica</i>                                  |                                |   | x |   | S   |                                         |
| <i>Heterodermia sitchensis</i>                             |                                |   | x |   | S   |                                         |
| <i>Hygomnia vittata</i>                                    |                                |   | x |   | S   |                                         |
| <i>Hypotrachyna revoluta</i>                               |                                |   | x |   | S   |                                         |
| <i>Ramalina pollinaria</i>                                 |                                |   | x |   | S   |                                         |
| <i>Nephroma isidiosum</i>                                  |                                |   | x |   | S   |                                         |
| <b>Bryophytes</b>                                          |                                |   |   |   |     |                                         |
| <i>Antitrichia curtipendula</i>                            |                                |   |   | x | S   |                                         |
| <i>Bartramiopsis lescurii</i>                              | x                              |   | x |   | S   |                                         |
| <i>Brotherella roelli</i>                                  | x                              |   | x |   |     |                                         |
| <i>Buxbaumia piperi</i>                                    | x                              |   | x |   | K   | Y                                       |
| <i>Buxbaumia viridis</i>                                   | x                              |   | x |   | S   | Y                                       |
| <i>Diplophyllu albicans</i>                                | x                              |   | x |   | S   |                                         |
| <i>Diplophyllum plicatum</i>                               | x                              | x |   |   |     |                                         |
| <i>Douinia ovata</i>                                       |                                |   |   | x |     |                                         |
| <i>Encalypta brevicolla</i> var. <i>crumiana</i>           | x                              |   | x |   | S   |                                         |
| <i>Herbertus aduncus</i>                                   | x                              |   | x |   | S   |                                         |
| <i>Herbertus sakuraii</i>                                  | x                              |   | x |   | S   |                                         |
| <i>Iwatsuklella leucotricha</i>                            | x                              |   | x |   | S   |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                                   | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|---------------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                                   | 1                              | 2 | 3 | 4 |     |                                         |
| <i>Kurzia makinoana</i>                           | x                              | x |   |   | S   |                                         |
| <i>Marsupella emarginata</i> var. <i>aquatica</i> | x                              | x |   |   |     |                                         |
| <i>Orthodontium gracile</i>                       | x                              |   | x |   | S   |                                         |
| <i>Plagiochila satol</i>                          | x                              | x | x |   | S   |                                         |
| <i>Plagiochila semidecurrens</i>                  | x                              |   | x |   | S   |                                         |
| <i>Pleuroziopsis ruthenica</i>                    | x                              |   | x |   | S   |                                         |
| <i>Ptilidium californicum</i> (CA only)           | x                              | x |   |   | S   |                                         |
| <i>Racomitrium aquaticum</i>                      | x                              |   | x |   | S   |                                         |
| <i>Radula brunnea</i>                             | x                              |   | x |   | S   |                                         |
| <i>Rhizomnium nudum</i>                           |                                |   |   |   | S   | Y                                       |
| <i>Schistostega pennata</i> (WA only)             | x                              |   | x |   |     |                                         |
| <i>Scouleria marginata</i>                        |                                |   |   | x | S   |                                         |
| <i>Tetraphis geniculata</i>                       | x                              |   | x |   | S   | Y                                       |
| <i>Tritomaria exsectiformis</i>                   | x                              | x |   |   | S   |                                         |
| <i>Tritomaria quinquedentata</i>                  | x                              |   | x |   | S   |                                         |
| <i>Ulota meglospora</i>                           |                                |   |   |   | S   | Y                                       |
| <b>Vascular Plants</b>                            |                                |   |   |   |     |                                         |
| <i>Allotropa virgata</i>                          | x                              | x |   |   | K   |                                         |
| <i>Arceuthobium tsugense</i>                      | x                              | x |   |   | S   |                                         |
| <i>Aster vialis</i>                               | x                              | x |   |   | S   |                                         |
| <i>Bensoniella oregana</i> (California)           | x                              | x |   |   |     |                                         |
| <i>Botrychium minganense</i>                      | x                              | x |   |   | S   |                                         |
| <i>Botrychium montanum</i>                        | x                              | x |   |   | S   |                                         |
| <i>Clintonia andrewsiana</i>                      | x                              | x |   |   | S   |                                         |
| <i>Coptis asplenifolia</i>                        | x                              | x |   |   |     |                                         |
| <i>Coptis trifolia</i>                            | x                              | x |   |   |     |                                         |
| <i>Corydalis aquae-gelidae</i>                    | x                              | x |   |   |     |                                         |
| <i>Cypripedium fasciculatum</i>                   | x                              | x |   |   | K   |                                         |
| <i>Cypripedium montanum</i>                       | x                              | x |   |   | S   |                                         |
| <i>Galium kamtschaticum</i>                       | x                              | x |   |   |     |                                         |
| <i>Habenaria orbiculata</i>                       | x                              | x |   |   |     |                                         |
| <i>Pedicularis howellii</i>                       | x                              | x |   |   |     |                                         |
| <i>Scoliopus biglovei</i>                         | x                              | x |   |   |     |                                         |
| <b>Arthropods</b>                                 |                                |   |   |   |     |                                         |
| Canopy herbivores (south range)                   |                                |   |   | x | S   |                                         |
| Coarse wood chewers (south range)                 |                                |   |   | x | S   |                                         |
| Litter and soil dwelling species (south range)    |                                |   |   | x | S   |                                         |
| Understory and forest gap herbivores              |                                |   |   | x | S   |                                         |
| <b>Mollusks</b>                                   |                                |   |   |   |     |                                         |
| <i>Ancotrema voyanum</i>                          | x                              | x |   |   |     |                                         |
| <i>Cryptomastix devia</i>                         | x                              | x |   |   |     |                                         |
| <i>Cryptomastix hendersoni</i>                    | x                              | x |   |   |     |                                         |
| <i>Helminthoglypta hertleini</i>                  | x                              | x |   |   |     |                                         |
| <i>Helminthoglypta talmadgei</i>                  | x                              | x |   |   |     |                                         |
| <i>Megomphix hemphilli</i>                        | x                              | x |   |   |     |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                          | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|------------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                          | 1                              | 2 | 3 | 4 |     |                                         |
| <i>Monadenia chaceana</i>                | x                              | x |   |   |     |                                         |
| <i>Monadenia churchi</i>                 | x                              | x |   |   |     |                                         |
| <i>Monadenia fidelis klamathica</i>      | x                              | x |   |   |     |                                         |
| <i>Monadenia fidelis minor</i>           | x                              | x |   |   |     |                                         |
| <i>Monadenia fidelis ochromphalus</i>    | x                              | x |   |   |     |                                         |
| <i>Monadenia troglodytes troglodytes</i> | x                              | x |   |   |     |                                         |
| <i>Monadenia troglodytes wintu</i>       | x                              | x |   |   |     |                                         |
| <i>Oreohelix n. sp.</i>                  | x                              | x |   |   |     |                                         |
| <i>Pristiloma articum crateris</i>       | x                              | x |   |   |     |                                         |
| <i>Trilobopsis roperi</i>                | x                              | x |   |   |     |                                         |
| <i>Trilobopsis tehamana</i>              | x                              | x |   |   |     |                                         |
| <i>Vertigo n. sp.</i>                    | x                              | x |   |   |     |                                         |
| <i>Vespericola pressleyi</i>             | x                              | x |   |   |     |                                         |
| <i>Vespericola shasta</i>                | x                              | x |   |   |     |                                         |
| <i>Deroceras hesperium</i>               | x                              | x |   |   |     |                                         |
| <i>Hemphillia barringtoni</i>            | x                              | x |   |   |     |                                         |
| <i>Hemphillia glandulosa</i>             | x                              | x |   |   |     |                                         |
| <i>Hemphillia malonei</i>                | x                              | x |   |   |     |                                         |
| <i>Hemphillia pantherina</i>             | x                              | x |   |   |     |                                         |
| <i>Prophysaon coeruleum</i>              | x                              | x |   |   |     |                                         |
| <i>Prophysaon dubium</i>                 | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 1</i>              | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 11</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 14</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 15</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 16</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 17</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 18</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 19</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 2</i>              | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 20</i>             | x                              | x |   |   |     |                                         |
| <i>Fluminicola n. sp. 3</i>              | x                              | x |   |   |     |                                         |
| <i>Fluminicola seminalis</i>             | x                              | x |   |   |     |                                         |
| <i>Juga (O.) n. sp. 2</i>                | x                              | x |   |   |     |                                         |
| <i>Juga (O.) n. sp. 3</i>                | x                              | x |   |   |     |                                         |
| <i>Lyogyrus n. sp. 1</i>                 | x                              | x |   |   |     |                                         |
| <i>Lyogyrus n. sp. 2</i>                 | x                              | x |   |   |     |                                         |
| <i>Lyogyrus n. sp. 3</i>                 | x                              | x |   |   |     |                                         |
| <i>Vorticifex klamathensis sinitsini</i> | x                              | x |   |   |     |                                         |
| <i>Vorticifex n. sp. 1</i>               | x                              | x |   |   |     |                                         |
| <b>Amphibians</b>                        |                                |   |   |   |     |                                         |
| Del Norte salamander                     | x                              | x |   |   | K   | Y                                       |
| Larch Mountain salamander                | x                              | x |   |   |     |                                         |
| Shasta salamander                        | x                              | x |   |   |     |                                         |
| Siskiyou Mountains salamander            | x                              | x |   |   | S   | Y                                       |
| Van Dyke's salamander (Cascades)         | x                              | x |   |   |     |                                         |



Table C-1. Management For SEIS Special Attention Species (continued)

|                                         | Survey Strategies <sup>1</sup> |   |   |   | K/S | Require Protection Buffers <sup>2</sup> |
|-----------------------------------------|--------------------------------|---|---|---|-----|-----------------------------------------|
|                                         | 1                              | 2 | 3 | 4 |     |                                         |
| <b>Birds</b>                            |                                |   |   |   |     |                                         |
| Great Gray Owl                          | x                              | x |   |   |     |                                         |
| White-headed woodpecker                 |                                |   |   |   |     | Y                                       |
| Black-backed woodpecker                 |                                |   |   |   | K   | Y                                       |
| Flammulated Owl                         |                                |   |   |   |     | Y                                       |
| Pygmy Nuthatch                          |                                |   |   |   |     | Y                                       |
| <b>Mammals</b>                          |                                |   |   |   |     |                                         |
| Lynx                                    |                                |   | x |   |     | Y                                       |
| Red tree vole ( <i>P. longicaudus</i> ) |                                | x |   |   | K   |                                         |
| <b>Bats</b>                             |                                |   |   |   |     |                                         |
| Fringed myotis                          | x                              | x |   |   | K   | Y                                       |
| Silver-haired bat                       | x                              | x |   |   |     |                                         |
| Long-eared myotis                       | x                              | x |   |   | K   | Y                                       |
| Long-legged myotis                      | x                              | x |   |   | K   | Y                                       |
| Pallid bats                             |                                |   |   |   |     | Y                                       |
| Townsend's big-eared bats               |                                |   |   |   | K   | Y                                       |

## Abbreviations used in this table:

- K = Documented to occur on the Coos Bay District.  
 S = Suspected to occur on the Coos Bay District.  
 Y = Species requiring protective buffer.

<sup>1</sup> Survey Strategies:

- 1 = Manage known sites.  
 2 = Survey prior to activities and manage sites.  
 3 = Conduct extensive surveys and manage sites.  
 4 = Conduct general regional surveys.

<sup>2</sup> Require Protective Buffers: See the text in the SEIS for requirements for species indicated.

Source: SEIS ROD, Table C-3



**Table C-2. Special Status Plant Species (Including Bryophytes, Fungi and Lichens) Occurring in the Planning Area**

| Scientific Name                                        | Common Name               | D/S | Status    |
|--------------------------------------------------------|---------------------------|-----|-----------|
| <b>Vascular Plants</b>                                 |                           |     |           |
| <i>Abronia latifolia</i>                               | yellow sandverbena        | D   | TS        |
| <i>Abronia umbellata</i> ssp. <i>breviflora</i>        | pink sandverbena          | D   | FC(2), SE |
| <i>Adiantum jordanii</i>                               | California maidenhair     | D   | TS        |
| <i>Allium bolanderi</i>                                | Bolander's onion          | D   | AS        |
| <i>Arctostaphylos hispidula</i>                        | hairy manzanita           | D   | AS        |
| <i>Aster vialis</i>                                    | wayside aster             | S   | FC(2)     |
| <i>Astragalus umbraticus</i>                           | woodland milkvetch        | S   | AS        |
| <i>Bensoniella oregona</i>                             | Bensonia                  | D   | FC(2)     |
| <i>Brodiaea terrestris</i>                             | dwarf brodiaea            | D   | AS        |
| <i>Cardamine gemmata</i>                               | purple toothwort          | S   | FC(2)     |
| <i>Carex gigas</i>                                     | Siskiyou sedge            | S   | AS        |
| <i>Castilleja ambigua</i> var. <i>ambigua</i>          | johnny-nip                | D   | TS        |
| <i>Cicenda quadrangularis</i> <sup>1</sup>             | microcala                 | D   | AS        |
| <i>Cochlearia officinalis</i>                          | spoonwort                 | S   | AS        |
| <i>Cordylanthus maritimus</i> ssp. <i>palustris</i>    | salt marsh birds-beak     | D   | FC(2)     |
| <i>Cyperus rivularis</i>                               | shining cyperus           | S   | TS        |
| <i>Cypripedium californicum</i>                        | California lady's-slipper | D   | TS        |
| <i>Cypripedium fasciculatum</i>                        | clustered lady's-slipper  | D   | BS        |
| <i>Darlingtonia californica</i>                        | California pitcher-plant  | D   | TS        |
| <i>Dichelostemma ida-maia</i>                          | firecracker flower        | S   | TS        |
| <i>Dudleya farinosa</i>                                | seacliff stonecrop        | D   | TS        |
| <i>Dulichium arundinaceum</i>                          | dulichium                 | D   | TS        |
| <i>Erigeron cervinus</i>                               | Siskiyou daisy            | S   | AS        |
| <i>Eriophorum chamissonis</i>                          | russet cotton-grass       | D   | AS        |
| <i>Erysimum concinnum</i>                              | Pacific wallflower        | S   | AS        |
| <i>Erythronium revolutum</i>                           | coast fawn-lily           | D   | TS        |
| <i>Gentiana setigera</i>                               | Waldo gentain             | D   | FC(2)     |
| <i>Haplopappus arborescens</i>                         | golden fleece             | D   | AS        |
| <i>Hieracium bolanderi</i>                             | Bolander's hawkweed       | D   | AS        |
| <i>Hydrocotyle verticillata</i>                        | whorled marsh pennywort   | S   | AS        |
| <i>Iliamna latibracteata</i>                           | California globe mallow   | D   | AS        |
| <i>Lasthenia macrantha</i> ssp. <i>prisca</i>          | large flowered goldfields | D   | FC(3C)    |
| <i>Lathyrus delnorticus</i>                            | Del Norte pea             | D   | TS        |
| <i>Lessingia filaginifolia</i> ssp. <i>californica</i> | beach-aster               | D   | TS        |
| <i>Lilium occidentale</i>                              | western bog lily          | S   | PE, SE    |
| <i>Limonium californicum</i>                           | sea-lavender              | D   | AS        |
| <i>Lycopodiella inundata</i> <sup>1</sup>              | bog club-moss             | D   | AS        |
| <i>Microseris bigelovii</i>                            | coast microseris          | S   | AS        |
| <i>Mimulus douglasii</i>                               | Douglas' monkeyflower     | D   | TS        |
| <i>Monardella purpurea</i>                             | Siskiyou monardella       | D   | AS        |
| <i>Oenothera wolfii</i>                                | Wolf's evening primrose   | D   | FC(1)     |
| <i>Ophioglossum pusillum</i>                           | Adder's-tongue            | S   | AS        |
| <i>Phacelia argentea</i>                               | silvery phacelia          | D   | FC(2)     |
| <i>Phacelia verna</i>                                  | spring phacelia           | D   | TS        |
| <i>Poa piperi</i>                                      | Piper's bluegrass         | D   | AS        |
| <i>Polystichum californicum</i>                        | California swordfern      | D   | AS        |



**Table C-2. Special Status Plant Species (Including Bryophytes, Fungi and Lichens) Occurring in the Planning Area (continued)**

| Scientific Name                                               | Common Name              | D/S | Status |
|---------------------------------------------------------------|--------------------------|-----|--------|
| <i>Romanzoffia thompsonii</i>                                 | Thompson's mist-maiden   | D   | BS     |
| <i>Salix delnortensis</i>                                     | Del Norte willow         | S   | AS     |
| <i>Scirpus subterminalis</i>                                  | water clubrush           | S   | TS     |
| <i>Sidalcea cusickii</i>                                      | Cusick's checkermallow   | D   | TS     |
| <i>Sidalcea hendersonii</i>                                   | Henderson's sidalcea     | S   | AS     |
| <i>Sidalcea malacroides</i>                                   | maple-leaved sidalcea    | S   | AS     |
| <i>Sidalcea malvaeflora</i> ssp. <i>patula</i>                | spreading checker mallow | D   | BS     |
| <i>Tofieldia glutinosa</i> ssp. <i>glutinosa</i>              | sticky tofieldia         | S   | TS     |
| <i>Triglochin striata</i>                                     | three-ribbed arrow-grass | S   | TS     |
| <i>Trillium angustipetalum</i> <sup>1</sup>                   | giant purple trillium    | D   | AS     |
| <i>Triteleia hendersonii</i> var. <i>leachiae</i>             | Leach's brodiaea         | D   | BS     |
| <i>Triteleia laxa</i>                                         | Ithuriel's spear         | S   | AS     |
| <i>Viola lanceolata</i> ssp. <i>occidentalis</i> <sup>1</sup> | western bog violet       | S   | BS     |

**Bryophytes (Mosses and Liverworts)**

|                                                  |           |   |    |
|--------------------------------------------------|-----------|---|----|
| <i>Calypogeia sphagnicola</i>                    | liverwort | S | AS |
| <i>Campylopus aureus</i>                         | moss      | S | BS |
| <i>Encalypta brevicolla</i> var. <i>crumiana</i> | moss      | S | BS |
| <i>Limbella fryei</i>                            | moss      | S | BS |
| <i>Racomitrium pacificum</i>                     | moss      | S | AS |
| <i>Triquetrella californica</i>                  | moss      | S | TS |

**Lichens and Fungi**

|                                                     |        |   |    |
|-----------------------------------------------------|--------|---|----|
| <i>Bryoria pseudocapillaris</i>                     | lichen | D | AS |
| <i>Buellia oidealea</i>                             | lichen | S | TS |
| <i>Caloplaca stantonii</i>                          | lichen | S | AS |
| <i>Cladidium bolanderi</i>                          | lichen | S | TS |
| <i>Erioderma sorediatum</i>                         | lichen | S | AS |
| <i>Lecanora caesiorubella</i> ssp. <i>merrillii</i> | lichen | S | TS |
| <i>Leioderma sorediatum</i>                         | lichen | S | AS |
| <i>Neibla cephalota</i>                             | lichen | D | TS |
| <i>Pseudocyphellaria mougeotiana</i>                | lichen | S | AS |
| <i>Schismatomma californicum</i>                    | lichen | S | TS |
| <i>Teloschistes flavicans</i>                       | lichen | D | TS |
| <i>Usnea rubicunda</i>                              | lichen | S | TS |

## Abbreviations used in this table:

|                               |                          |
|-------------------------------|--------------------------|
| D = Documented                | S = Suspected            |
| AS = Assessment Species       | BS = Bureau Sensitive    |
| SE = State Endangered, listed | PE = Proposed Endangered |
| FC = Federal Candidate        | TS = Tracking Species    |

<sup>1</sup> Reflects name change since publication of draft RMP.

NOTE: for explanation of status categories, see footnote on Table C-3.

Oregon Natural Heritage Program, August 1993



**Table C-3. Special Status Animal Species Known or Suspected to Occur in the Coos Bay District**

| Scientific Name                        | Common Name                   | Status <sup>1</sup> |       |
|----------------------------------------|-------------------------------|---------------------|-------|
|                                        |                               | Federal             | State |
| <b>Birds</b>                           |                               |                     |       |
| <i>Gavia immer</i>                     | Common Loon                   | BA                  | —     |
| <i>Podiceps auritus</i>                | Horned Grebe                  | BT                  | SP    |
| <i>Podiceps grisegena</i>              | Red-necked Grebe              | BS                  | SC    |
| <i>Oceanodroma furcata</i>             | Fork-tailed Storm-petrel      | BA                  | SV    |
| <i>Pelecanus occidentalis</i>          | Brown Pelican                 | FE                  | SE    |
| <i>Casmerodius albus</i>               | Great Egret                   | BT                  | SU    |
| <i>Egretta thula</i>                   | Snowy Egret                   | BA                  | SV    |
| <i>Branta canadensis leucopareia</i>   | Aleutian Canada Goose         | FT                  | SE    |
| <i>Branta canadensis minima</i>        | Cackling Canada Goose         | BT                  | —     |
| <i>Branta canadensis occidentalis</i>  | Dusky Canada Goose            | BT                  | —     |
| <i>Aythya collaris</i>                 | Ring-necked Duck              | BT                  | —     |
| <i>Aythya affinis</i>                  | Lesser Scaup                  | BT                  | —     |
| <i>Histrionicus histrionicus</i>       | Harlequin Duck                | FC2                 | SP    |
| <i>Bucephala albeola</i>               | Bufflehead                    | BA                  | SP    |
| <i>Elanus leucurus</i>                 | White-tailed Kite             | BT                  | —     |
| <i>Haliaeetus leucocephalus</i>        | Bald Eagle                    | FT                  | ST    |
| <i>Accipiter gentilis</i>              | Northern Goshawk              | FC2                 | SC    |
| <i>Falco columbarius</i>               | Merlin                        | BA                  | —     |
| <i>Falco peregrinus</i>                | Peregrine Falcon              | FE                  | SE    |
| <i>Oreortyx picta</i>                  | Mountain Quail                | FC2                 | —     |
| <i>Charadrius alexandrinus nivosus</i> | Western Snowy Plover          | FT                  | ST    |
| <i>Tringa melanoleuca</i>              | Greater Yellowlegs            | BA                  | —     |
| <i>Numenius americanus</i>             | Long-billed Curlew            | BT                  | —     |
| <i>Sterna caspia</i>                   | Caspian tern                  | BT                  | —     |
| <i>Brachyramphus marmoratus</i>        |                               |                     |       |
| <i>marmoratus</i>                      | Marbled Murrelet              | FT                  | SC    |
| <i>Glaucidium gnoma</i>                | Northern Pygmy Owl            | BT                  | SU    |
| <i>Athene cunicularia</i>              | Burrowing Owl                 | BS                  | SC    |
| <i>Strix occidentalis caurina</i>      | Northern Spotted Owl          | FT                  | ST    |
| <i>Selasphorus sasin</i>               | Allen's Hummingbird           | BT                  | —     |
| <i>Melanerpes lewis</i>                | Lewis' Woodpecker             | BS                  | SC    |
| <i>Melanerpes formicivorus</i>         | Acorn Woodpecker              | BT                  | SU    |
| <i>Picoides arcticus</i>               | Black-backed Woodpecker       | BS                  | SC    |
| <i>Dryocopus pileatus</i>              | Pileated Woodpecker           | BS                  | SC    |
| <i>Sayornis nigricans</i>              | Black Phoebe                  | BT                  | —     |
| <i>Progne subis</i>                    | Purple Martin                 | BS                  | SC    |
| <i>Sialia mexicana</i>                 | Western Bluebird              | BT                  | SV    |
| <i>Lanius ludovicianus</i>             | Loggerhead Shrike             | FC                  | SU    |
| <b>Mammals</b>                         |                               |                     |       |
| <i>Plecotus townsendii</i>             | Townsend's Big-Eared Bat      | FC2                 | SC    |
| <i>Plecotus townsendii townsendii</i>  | Pacific Western Big-Eared Bat | FC                  | SC    |
| <i>Myotis thysanodes</i>               | Fringed Myotis                | BS                  | SV    |
| <i>Arborimus albipes</i>               | White-Footed Vole             | FC2                 | SU    |
| <i>Martes pennanti pacifica</i>        | Pacific Fisher                | FC2                 | SC    |
| <i>Thomomys mazama helleri</i>         | Gold Beach Western            |                     |       |
|                                        | Pocket Gopher                 | FC2                 | —     |
| <i>Thomomys bottae detumidus</i>       | Pistol River Pocket Gopher    | FC2                 | —     |
| <i>Bassariscus astutus</i>             | Ringtail                      | BT                  | SU    |



**Table C-3. Special Status Animal Species Known or Suspected to Occur in the Coos Bay District (continued)**

| Scientific Name                    | Common Name                                    | Status <sup>1</sup> |       |
|------------------------------------|------------------------------------------------|---------------------|-------|
|                                    |                                                | Federal             | State |
| <i>Martes americana</i>            | Marten                                         | BS                  | SC    |
| <i>Balaenoptera musculus</i>       | Blue Whale                                     | FE                  | SE    |
| <i>Balaenoptera physalus</i>       | Finback Whale                                  | FE                  | SE    |
| <i>Balaena glacialis</i>           | Right Whale                                    | FE                  | SE    |
| <i>Balaenoptera borealis</i>       | SEI Whale                                      | FE                  | SE    |
| <i>Physeter catodon</i>            | Sperm Whale                                    | FE                  | SE    |
| <i>Enhydra lutris nereis</i>       | Southern Sea Otter                             | FT                  | ST    |
| <i>Enhydra lutris</i>              | Sea Otter                                      | BA                  | ST    |
| <i>Eschrichtius robustus</i>       | Grey Whale                                     | FE                  | SE    |
| <i>Eumetopias jubatus</i>          | Northern (Stellar) Sea Lion                    | FT                  | SC    |
| <i>Megaptera novaeangliae</i>      | Humpback Whale                                 | FE                  | SE    |
| <b>Amphibians</b>                  |                                                |                     |       |
| <i>Rhyacotriton variegatus</i>     | Southern Torrent (formerly Olympic) Salamander | BT                  | SV    |
| <i>Aneides ferreus</i>             | Clouded Salamander                             | BT                  | SU    |
| <i>Batrachoseps attenuatus</i>     | California Slender Salamander                  | BA                  | SP    |
| <i>Plethodon elongatus</i>         | Del Norte Salamander                           | FC2                 | SV    |
| <i>Plethodon stormi</i>            | Siskiyou Mountains Salamander                  | FC2                 | SV    |
| <i>Bufo boreas</i>                 | Western Toad                                   | BT                  | SV    |
| <i>Ascaphus truei</i>              | Tailed Frog                                    | BT                  | SV    |
| <i>Rana aurora aurora</i>          | Northern Red-Legged Frog                       | FC2                 | SU    |
| <i>Rana boylei</i>                 | Foothill Yellow-legged Frog                    | FC2                 | SV    |
| <i>Rana pretiosa</i>               | Spotted Frog                                   | FC                  | SC    |
| <b>Reptiles</b>                    |                                                |                     |       |
| <i>Chrysemys picta</i>             | Painted Turtle                                 | BS                  | SC    |
| <i>Clemmys marmorata marmorata</i> | Western Pond Turtle                            | FC2                 | SC    |
| <i>Caretta caretta</i>             | Loggerhead Sea Turtle                          | FE                  | ST    |
| <i>Chelonia mydas</i>              | Green Sea Turtle                               | FE                  | SE    |
| <i>Dermochelys coriacea</i>        | Leatherback Sea Turtle                         | FE                  | SE    |
| <i>Lepidochelys olivacea</i>       | Pacific Ridley Sea Turtle                      | FT                  | ST    |
| <i>Contia tenuis</i>               | Sharptail Snake                                | BT                  | SV    |
| <i>Lampropeltis zonata</i>         | California Mountain Kingsnake                  | BT                  | SP    |
| <i>Lampropeltis getulus</i>        | Common Kingsnake                               | BT                  | SP    |

<sup>1</sup>Abbreviations used in this table:**Federal Categories:**

- FT = Federal Threatened  
 FE = Federal Endangered  
 C = Federal Candidate

**Federal Candidate Categories:**

- 1 Taxa with enough information to support proposals to list as endangered or threatened.  
 2 Taxa with some evidence of vulnerability, but for which there are not enough data to support listing proposals at this time.  
 3C Taxa which have proven to be more abundant or widespread than previously believed and/or which have no identifiable threats. This status is based only on the most recently published Candidate Notice of Review.

**BLM Categories:**

- BA = Bureau Assessment species  
 BT = Bureau Tracking species  
 BS = Bureau Sensitive species



**Table C-3. Special Status Animal Species Known or Suspected to Occur in the Coos Bay District (continued)**

**Bureau Sensitive Species** - In Oregon, these are taxa which are eligible for federal listed, federal candidate, or state listed status. These taxa are from the Oregon Sensitive Species-Critical list and/or Oregon Natural Heritage Program (ONHP) List 1.

**Bureau Assessment Species** - Species not included as FT, FE, FP, FC, State Listed or BS which are on the ONHP List 2.

**Bureau Tracking Species** - Taxa not included as FT, FE, FP, FC, State Listed, BS or BA which are State Sensitive (Vulnerable, Peripheral or Naturally Rare, or Status Undetermined) or on ONHP List 3 or 4.

The Oregon Natural Heritage Program maintains five lists of special status species:

- List 1 contains taxa that are threatened with extinction or presumed to be extinct throughout their entire range.
- List 2 contains taxa that are threatened with extirpation or presumed to be extirpated from the state of Oregon. These are often peripheral or disjunct species which are of concern when considering the floral and faunal diversity within Oregon's borders.
- List 3 contains species for which more information is needed before status can be determined, but which may be threatened or endangered in Oregon or throughout their range.
- List 4 contains taxa which are of concern, but are not currently threatened or endangered. This includes taxa which are very rare but are currently secure, as well as taxa which are declining in numbers or habitat but are still too common to be proposed as threatened or endangered.
- The fifth category, Taxa Considered but Rejected, contains all taxa deleted from any of the above lists or nominated to these lists but rejected. (ONHP 1993)

**State Categories:**

- ST = State Threatened
- SE = State Endangered
- SC = State Critical
- SV = State Vulnerable
- SU = State Undetermined Status
- SP = State Peripheral or Naturally Rare

**State Critical (SC)** - Species for which listing as threatened or endangered is pending; or those for which listing as threatened or endangered may be appropriate if immediate conservation actions are not taken. Also considered critical are some peripheral species which are at risk throughout their range, and some disjunct populations.

**State Vulnerable (SV)** - Species for which listing as threatened or endangered is not believed to be imminent and can be avoided through continued or expanded use of adequate protective measures and monitoring. In some cases the population is sustainable, and protective measures are being implemented; in others, the populations may be declining and improved protective measures are needed to maintain sustainable populations over time.

**State Undetermined Status (SU)** - Animals in this category are species for which status is unclear. They may be susceptible to population decline of sufficient magnitude that they could qualify for endangered, threatened, critical or vulnerable status, but scientific study will be required before a judgement can be made.

**State Peripheral or Naturally Rare (SP)** - Peripheral species refer to Oregon populations on the edge of their range. Naturally rare species had low population numbers historically in Oregon because of naturally limiting factors. Maintaining the status quo for the habitats and populations of these species is a minimum requirement. Disjunct populations of several species which occur in Oregon should not be confused with peripheral.

Oregon Natural Heritage Program, August 1993







# Appendix D. Best Management Practices for Maintaining Water Quality and Soil Productivity

## Introduction

The Best Management Practice (BMP) concept used in this Resource Management Plan (RMP) is designed to protect water quality, enable the achievement of water quality standards, and maintain soil productivity. The concept was developed and initiated in federal water quality legislation, with the focus of implementation at the state level. The Oregon Department of Environmental Quality (DEQ) has granted Designated Management Agency status to the BLM, making BLM responsible for implementing BMPs on the lands it administers. The BLM is also guided by the Clean Water Act of 1972 as amended in 1977 and 1987, state of Oregon water quality legislation (chapter 340), and the O&C Act. These BMPs are designed to comply with standards of the Oregon Forest Practices Act. Also, in the RMP, there are management actions/direction specific to all land use allocations and resources.

The RMP will utilize a mix of conservation practices such as those identified in this appendix or their equivalent. Together, these practices will become the BMP design for a project. The soil and water protection measures described below are types of controls that will be used to maintain water quality and to protect soil productivity and dependent beneficial uses.

The iterative process used in selecting and implementing nonpoint controls—including BMPs—to achieve water quality standards includes:

- Design of BMPs based upon site-specific conditions; technical, economical, and institutional feasibility; and the water quality of those waters potentially impacted.
- Monitoring to ensure that practices are properly designed and applied.
- Monitoring to determine the effectiveness of practices in meeting water quality standards and the appropriateness of water quality criteria in reasonably assuring protection of beneficial uses.
- Adjustment of BMPs when water quality standards are not being protected to a desired level and/or possible adjustment of water quality standards based upon considerations in 40 CFR 131.

BMPs revised through the iterative process of monitoring and adjustment are expected to lead to achievement of water quality standards. The following list of conservation practices are more specific than, and in addition to, the Management Action Direction contained in the RMP. The conservation practices are not, however, intended to be all inclusive nor replace site-specific project planning, which may require the use of different or additional conservation practices.

## Four Goals

- Goal #1** - Maintain water quality within State Water Quality Standards and Clean Water Act requirements.
- Goal #2** - Meet the objectives of the Aquatic Conservation Strategy described in the RMP.
- Goal #3** - Manage soil productivity at or above natural levels.
- Goal #4** - Use the watershed analysis planning process as a means of identifying initial sets of conservation practices on watersheds 20-200 square miles in size that could be used for future activities in a BMP design.



## Conservation Practices for Soil and Water Planning and Management

1. An interdisciplinary (ID) team, including a soil scientist and/or a hydrologist, will review all proposed activities that have potential to adversely impact soil or water. Soil and water protection will be an integral part of all plans. If necessary, plan modification or additional mitigation will be used to keep impacts to an acceptable minimum, while not adversely affecting aquatic conservation strategy objectives.
2. Watershed restoration planning will be done with watershed analysis to improve impaired watershed function and water quality. An inventory and implementation schedule will be developed as funds become available.
3. A floodplain and wetland evaluation will be completed prior to any land acquisition, disposal by sale or exchange, or where development or alterations of wetlands may occur.
4. Construction in, or change of, floodplains and wetland character will not occur when there is a viable alternative that avoids these important lands, unless done for enhancement purposes.
5. Community and noncommunity domestic supply watersheds will be managed for multiple use, but with a special emphasis on protection of water quality consistent with state standards and the Aquatic Conservation Strategy.
6. Pesticide applications used for growing, harvesting, and protecting forest tree species will conform with the Aquatic Conservation Strategy and the BMPs identified in the ROD for the *Western Oregon Program - Management of Competing Vegetation*.
7. To avoid water contamination, care will be taken in siting of temporary camps and also proper waste disposal procedures will be used.
8. Following wildfires, a rehabilitation plan will be developed using the ID team process. Site-specific information will be collected and treatments will be developed based on soils, water, and downstream values.
9. A plan for responding to hazardous substance spills will be developed and updated annually for spill prevention and control.
10. Ongoing activities may be interrupted or halted at the discretion of the District Manager or Area Manager for soil and water protection purposes.

## Conservation Practices for Streams and Riparian Reserves

1. Riparian Reserves would be designated along all streams, lakes, ponds, and other waterbodies for attainment of the Aquatic Conservation Strategy.
2. Watershed analysis will precede forest activities in a Riparian Reserve except those categorically excluded under NEPA.
3. Naturally-occurring down logs or trees will not be removed from Riparian Reserves except for the benefit of the stream or Riparian Reserve. Potentially floatable debris that may be mobilized during infrequent floods and may reasonably damage downstream users' improvements may be removed after watershed analysis.
4. Timber will be directionally-felled or line-pulled away from perennial streams or Riparian Reserves when harvesting within a tree length of either, except to enhance stream structure by felling trees into the stream.



5. Stream crossings will be minimized and located where channels are well-defined, unobstructed, and straight. Crossings will be designed to minimize soil erosion, stream sedimentation, and adverse impacts on aquatic habitat.
6. The use of heavy equipment in streams will be restricted to that area necessary for correct installation of crossing structures, water source development, watershed restoration, or fisheries enhancement projects.
7. When possible, streams will be diverted around construction sites where fishery or other important stream values are present.
8. Culverts or pipe arches placed on valuable fish streams will be at zero to 0.5 percent or natural stream grade.
9. Energy dissipation material will be placed on fills around the inlet and outlet structures.
10. Filling, material removal, or channel relocation will not be allowed in fish-bearing streams (except for stream restoration projects) unless no other alternative exists .
11. Instream habitat improvement structures will be designed using state-of-art techniques and to be in balance with local stream hydraulics.
12. Low water fords will be used only as a last resort, and then during the driest time of the year with minimum streambank disturbance. Rocked approaches and erosion control practices will be used during and following any use of fords. The pre-existing stream channel—including bed and banks—will be restored after need for the ford ceases.
13. Refueling, equipment maintenance, fuel storage, or other handling of petroleum products will not occur in Riparian Reserves.
14. Placer mining claimants will be required to obtain all necessary federal and state operating permits before beginning work.

## **Conservation Practices for Road and Landing Construction**

1. Road and landing construction activities will be limited to the dry season, generally from June into October.
2. Roads and landings will be designed and constructed to BLM standards, but be the narrowest and smallest sizes that will still meet safety standards, objectives of anticipated uses, and resource protection.
3. Roads and landings will be located out of Riparian Reserves to the extent possible. Unless construction is under existing reciprocal road right-of-way agreements, watershed analysis will precede location of any new roads or landings that must occur in a Riparian Reserve.
4. Roads will be located on stable locations as much as possible (e.g., ridge tops, stable benches or flats, and gentle-to-moderate side-slopes). Grades will be rolled (varied) to maintain stable locations. Headwalls, old slump benches, seeps, and side slopes in excess of 65 percent will be avoided as much as possible. Heights of cutbanks will be minimized and balanced earthwork will be used.
5. Road construction will be avoided as much as possible on slopes where geologic bedding planes are inclined with the slope.
6. The theoretical 100-year flood will be used as design criteria for all culverts, bridges, and other stream crossings, including allowance for bed load and debris. Stream crossings will be constructed with low diversion potential.



7. To minimize sidecasting of waste material, 100 percent end-haul (90 percent or greater actual) will be required where roads and landings must be located on side slopes exceeding 60 percent. On all road segments requiring end-haul, a tracked excavator will be preferred for pioneering and main excavation work. Other equipment capable of achieving this goal may be utilized. Pioneer work will be confined to within-roadway construction limits.
8. Stable end-haul (waste) sites will be located prior to end-hauling. These sites will be kept properly shaped, drained, and vegetated.
9. Controlled blasting techniques that minimize the amount of soil/rock displaced from the road location will be used.
10. Only soil and rock materials will be used in fills. Organic materials will not be used. Fills will be compacted between 85 and 95 percent maximum density. Light-weight fills consisting of chips, bark, or other material may be used in areas where rotational slumps have potential to cause road failures.
11. Road drainage will be designed to minimize soil erosion and stream sedimentation. Energy dissipators, culvert down pipes, or drainage dips will be used where water is discharged onto loose material and onto erodible or steep slopes.
12. Road surface shape (e.g., crowning, insloping, and outsloping) that meets planned use and resource protection needs will be used.
13. New roads to be included in the permanent road system will normally have a rock surface applied. Those new roads having a natural surface (generally roads in Curry County) may have the dirt surface seeded, mulched, and fertilized.
14. New roads not included in the permanent road system will be restored on completion of use. The road surface will be seeded and mulched, stream crossings restored, and the road generally blocked from further use. These roads may also be decommissioned through use of a winged ripper during the driest part of the year.
15. Following use of landings that have side slopes exceeding 60 percent, all soil, rock, and cull woody debris material that has been pushed over the edge will be pulled back to a stable part of the landing surface.
16. Soil erosion control work will be completed the same season disturbance occurs and using the district seed mix. Seed and fertilizer will be applied during the optimum time for establishment and prior to winter rains, primarily September 1 to October 30, and secondarily March 15 to May 15.
17. Drainage and soil erosion control practices will be applied to renovated or reconstructed roads in the same manner as newly-constructed roads.
18. Road maintenance activities will be planned to minimize soil erosion and subsequent stream sedimentation. Heavy equipment will be used to clean ditches at necessary intervals. Undercutting of backslopes will be avoided. Bare soil created by maintenance activities will be protected from soil erosion as soon as possible.
19. Sloughed cutbank materials will not be sidecast onto slopes greater than 60 percent, nor into or near drainages. This material will be end-hauled to a stable site.
20. Low-growing, herbaceous ground cover and brush will be retained on cut-and-fill slopes unless it poses a safety hazard.
21. Permanent, effective drainage will be provided on roads that are closed but not totally reclaimed. Waterbars, dips, or outsloping will be used; culverts and bridges will be removed; and the natural drainway re-established.



## Conservation Practices for Timber Harvest

1. Timber sale units will be designed to minimize adverse impacts on soils and water. The sale contract will contain stipulations for protection or mitigation. All Riparian Reserves, perennial and intermittent streams, and other water features will be shown on planning and contract maps.
2. Yarding through Riparian Reserves will be avoided unless there is no reasonable alternative. The location, number, and width of corridors will be specified prior to yarding, and natural openings will be used as much as possible. Not more than 250 feet of yarding corridors would be allowed within any 1,000 feet of stream. Maximum corridor width will be 50 feet, and corridors will be at least 50 feet apart. Full log suspension will be used where feasible.
3. Cable yarding, preferably with partial log suspension, will be the preferred standard method for log yarding on all district lands.
4. Cable systems capable of at least partial log suspension will be required to yard all lands inventoried as FGR1 and FGR2 in the TPCC system.
5. Aerial systems or skyline cable systems capable of full log suspension will be utilized when feasible to yard all lands inventoried as FGR2 in the TPCC system.
6. Seasonal yarding restrictions will be used in some areas where the desired log suspension cannot be achieved.
7. Downhill yarding will be avoided unless used to prevent additional or difficult road or landing construction.
8. Ground-Based Yarding Systems
  - a. If tractors or rubber-tired skidders are used for log skidding, skid trails will be designated with the objective of having less than 12 percent of a harvest area affected by compaction. Existing skid roads will be used to the extent practical.
  - b. Tractors or rubber-tired skidders will be restricted to slopes of less than 35 percent and used only during the driest part of the year, typically mid-July to mid-September.
  - c. Other ground-based yarding systems (e.g., spider-walkers and feller bunchers) may be used on slopes over 35 percent, provided the expected growth-loss effect is insignificant and skid trails involve less than 12 percent of the harvest area.
  - d. Following use, skid roads not needed for future entries will be ripped at the optimum time, using a winged subsoiler and the land will be returned to timber production.
  - e. Skid trails needed for future entries will have erosion control and drainage measures applied between usage.
  - f. Drainage and erosion control measures, including water barring of skid trails, will be applied to bare soil areas following use and prior to winter rains.

## Conservation Practices for Silvicultural Operations

1. Riparian Reserves—including open water and wetlands—will be protected during fertilizer application. Buffers at least 100 feet wide will be planned along all flowing streams that have domestic use, support fisheries, or have other important uses. Riparian Reserve buffer widths will be planned around lakes and ponds. Application will be avoided during heavy rain or when wind speed could cause drift. Storage, transfer, and loading sites will be located away from streams and outside Riparian Reserves.



2. Where burning is necessary for site preparation, site-specific prescriptions will be used.
3. Burning prescriptions will be strictly adhered to on highly sensitive soils. These soils include: shallow, rocky soils on 70 percent or greater slopes with south or west aspect, located out of the "fog belt"; and the same kinds of soils on extremely steep (80 percent or greater), and north and east aspects in the drier parts of the district.
4. As much large, down, woody material will be left onsite as possible while still meeting site preparation needs. Gross yarding will be used on steep headwalls and deep V-shaped draws to decrease or break up logging debris concentrations, reduce fire intensity, and minimize potential debris torrent damage. The need for, and amount of, gross yarding will be determined by site-specific watershed analysis. Old embedded logs or other logs that contribute to bank stability will not be removed.
5. Where machine piling of logging debris is used, first preference will be given to low ground pressure backhoe/loader/grapple type equipment. If conventional tractor piling is used, brush blades will be required and piling will be done under strict soil and water protecting constraints. Any machine piling will be done during the driest part of the year, and compacted areas would be tilled with properly designed equipment.
6. Use of tractors for fireline construction will be limited as much as possible, and tractors will be restricted to slopes less than 35 percent. Tractor-constructed fire trails will be waterbarred.
7. Grass/legume seeding of units may be done to protect highly erosive soils following burning. This will be coordinated and reconciled with wildlife and silvicultural objectives.



# **Appendix E. Silvicultural Systems and Harvest Methods Used in the Proposed Resource Management Plan**

## **General Forest Management Area**

Silvicultural systems in the General Forest Management Area will be designed to promote production of merchantable timber, while retaining some larger trees and snags and maintaining forest health, productivity, and biological diversity. All treatments would be compatible with the ecological requirements of the communities of native plant and animal species present, and would be tailored to the condition of each stand. The results of watershed analysis would be used to help select and design silvicultural systems through better understanding of landscape-level patterns and ecological processes.

The quality of wood, value of logs ultimately produced, and economic efficiency would be important considerations for all planned treatments.

Lands available for harvest would be managed generally as even-aged stands with partial overstories of larger trees. The silvicultural prescription will provide for the retention of down logs necessary for ecological function.

Harvest systems will be consistent with the Best Management Practices (BMPs) described in Appendix D.

## **Silvicultural Treatments**

Management actions in General Forest Management Areas would consist of six general types of treatments: regeneration harvest with partial retention; site preparation following harvest; reforestation treatments; management of young stands; commercial thinnings in mid-aged stands; and management of overstory trees, snags, and large woody debris. Each of these treatments is described below.

### **Regeneration Harvest**

Regeneration harvests on available forest lands would generally occur in stands at or above the age of the culmination of mean annual increment (CMAI). On the Coos Bay District, this varies from stand age 60 to 100 years. Regeneration harvest would not be planned for stands less than 60 years of age.

### **Site Preparation**

Following regeneration harvest, residual vegetation and logging debris would be treated if necessary to reduce fire hazard, provide room for planting of tree seedlings, lessen initial competition from other vegetation, and limit the cover for seedling-damaging rodents. Methods used would include, but not be limited to, prescribed fire, manual cutting and piling, and mechanical clearing.

### **Reforestation**

Normally, all sites that receive regeneration harvest and do not require burning would be reforested within one year of cutting. If slashing and/or burning is required to prepare a site for planting, reforestation may be delayed beyond one year pending burn prescriptions and smoke management clearance. Most areas would be planted with seedlings grown from genetically-selected seed collected within the same seed zone and elevation. (See Appendix F for a description of the Coos Bay District's Genetics Program.) The selection of tree species, planting density, and stock types would depend on site characteristics, the composition of the original stand, and projected future management of each stand. Areas having identified root disease would be planted with species either resistant or immune to the disease, or in a manner that would reduce the likelihood of spreading the disease. Animal damage control measures would be implemented to reduce animal populations when they



reach levels that threaten forest stands. A district Animal Control Plan would be developed through an interdisciplinary team approach and in coordination with the Oregon Department of Fish and Wildlife. The plan would address animals such as mountain beaver, black bear, deer, and elk.

### Management of Young Stands

During the first 10-15 years after planting, young stands would receive treatments (as necessary and as funding allows) to promote their establishment, survival, and growth. The treatments would involve managing competing vegetation, protecting seedlings from severe local site conditions, and preventing excessive animal damage. Treatments would include, but not be limited to, manual cutting of brush and seedling protection measures such as placement of plastic mesh tubes on seedlings and trapping of rodents.

When funding is available, suitable stands aged 10-20 years would receive treatments designed to improve their growth, value, and wood quality. These treatments include precommercial thinning, release, pruning, and fertilization.

### Commercial Thinnings

Stands approximately 30-70 years of age would be considered for commercial thinning. One or two thinnings may be scheduled over the life of an individual stand.

The objectives of commercial thinning may include one or more of the following:

- Increase the proportion of merchantable volume in the stand.
- Produce larger, more valuable logs.
- Anticipate mortality of small trees as the stand develops.
- Maintain good crown ratios and stable, windfirm trees.
- Accelerate development of trees that can later provide large-diameter snags and down logs.
- Manage species composition.
- Promote development of desired understory vegetation.

Nitrogen fertilizer may be applied following completion of thinnings.

Pruning of selected trees may be considered to increase future value.

In any case, the decision to thin any given stand would depend on site-specific factors such as slope and topography, distance to roads, soil types, stand density, species composition, average tree diameter, and forest health considerations.

### Management of Overstory Trees, Snags, and Large Woody Debris

During partial-cut or regeneration harvests, existing snags would be reserved from cutting whenever feasible and to the extent necessary to meet snag habitat objectives. Some snags may need to be removed, however, for road construction, safety reasons, or to make way for log yarding in some situations. The trees reserved from regeneration harvest would normally not be considered available for future harvest. Some may be damaged or killed during slash burning, while others may blow down or break off during windstorms. Such trees would then become part of the supply of snags and large woody debris. Many reserved trees would likely survive and grow, providing additional structural and functional habitat diversity as younger stands develop beneath them. Some trees reserved for snag recruitment may be topped, girdled, or felled over time to help meet long-range goals for snags.



## Selection of Harvest Areas

Listed below are harvest area selection guidelines for regeneration harvest and commercial thinning.

### Regeneration Harvest

For available forest lands, treatment areas would be selected, when feasible, from the least productive stands first. Stands that appear to have low stocking, damage, disease, generally low growth rates, or a predominance of noncommercial species resulting from past management would receive higher priority for harvest.

### Commercial Thinning

Treatment areas would be selected from well-stocked or overstocked stands where density reduction is needed to maintain good diameter growth rates, live crown ratios, and stand stability. Selection of thinning areas may depend on access and logging feasibility.

### Landscape Design

Harvest units, including regeneration harvest and commercial thinnings, would be placed where needed to meet landscape objectives on three levels of scale: the physiographic province, the landscape block or watershed, and the stand.

### Regeneration Harvest Design

Silvicultural prescriptions for regeneration harvest would be based on knowledge of plant communities, successional relationships, and ecosystem functions. Knowledge of these relationships would be used to help prevent vegetation management problems before they occur. Harvest plans would provide for maintenance of long-term site productivity and forest health.

Regeneration harvest units would vary in size, depending on factors such as ownership, topography, and road locations. Appropriate treatment areas would be determined through watershed analysis.

Harvest unit shapes would be irregular, conforming where possible to topographic features, but limited in many cases by logging feasibility, ownership boundaries, reserve boundaries, or other land use allocations. An average of 6 to 8 green coniferous trees per acre would be reserved from harvest as clumps, strips, and scattered individual trees. The distribution of reserved trees would be designed to help meet habitat goals and to minimize interference with log yarding.

In addition to the previous green tree retention management action/direction, green trees would be retained for snag recruitment in timber harvest units where there is an identified, near-term (less than three decades) snag deficit. These trees do not count toward green-tree retention requirements.

Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be regeneration harvested, the prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

### Partial-Cut Harvest Design

Commercial thinnings would generally be designed to maintain good volume productivity of the stand. To accomplish this, a stand might be thinned before relative density exceeds 0.60, leaving a residual relative density of approximately 0.40. Depending on stand age, tree size, and the specific objectives of the thinning, stand density after thinning would range from approximately 50 to 150 trees per acre.



Commercial thinning treatment areas would vary in size, depending on factors such as operability and site conditions. Appropriate treatment areas would be determined through watershed analysis. A variety of thinning intensities may be designated within a treatment unit to reflect current within-stand spatial patterns or to meet stand development objectives.

In some portions of stands, thinning may consist only of removal of the smaller (intermediate and suppressed) trees in the stand. In other areas, many of the larger codominant and dominant trees may also be removed.

Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be thinned, the thinning prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

## Connectivity/Diversity Blocks

Silvicultural systems in the Connectivity/Diversity blocks would be designed to promote development of late-successional forest structure within a longer rotation, while providing an output of merchantable timber and maintaining forest health and productivity. All treatments would be compatible with the ecological requirements of the communities of native plant and animal species present; they also would be tailored to the condition of each stand. The results of watershed analysis would be used to help select and design silvicultural systems through better understanding of landscape-level patterns and ecological processes.

Important considerations for all planned treatments would include the quality of wood, value of logs ultimately produced, and economic efficiency.

Lands available for harvest would be managed generally as even-aged stands with substantial overstories of larger trees.

The silvicultural prescription will provide for the retention of down logs necessary for ecological function.

Harvest systems utilized will be consistent with the BMPs as described in Appendix D.

## Silvicultural Treatments

Management of the Connectivity/Diversity Blocks would consist of six general types of treatments: regeneration harvest with partial retention; site preparation following harvest; reforestation treatments; management of young stands; density management thinnings in mid-aged stands; and management of overstory trees, snags, and large woody debris. Each of these treatments is described below.

### Regeneration Harvest

Regeneration harvests on available forest land would be planned for a 150-year area control rotation. This means that approximately 1/15 of the available acres would receive regeneration harvest in any decade. On the Coos Bay District, portions of some stands would be cut at stand ages as low as 60 years during the first decade, where older stands are not available or to develop a better distribution of age classes over time. Regeneration harvest would not be planned for stands less than 60 years of age.

### Site Preparation

Following regeneration harvest, sites would receive treatment of understory vegetation and logging debris if necessary to reduce fire hazard, provide room for planting of tree seedlings, lessen initial competition from other vegetation, and limit the cover for seedling-damaging rodents. Methods used would include, but not be limited to, prescribed fire (underburning), machine piling, and manual cutting.



## **Reforestation**

Normally, all sites that receive regeneration harvest and do not require burning would be reforested within one year of cutting and using seed collected within the same seed zone and elevation. If slashing and/or burning is required to prepare sites for planting, reforestation may be delayed beyond one year pending smoke management clearance. The selection of tree species, planting density, and stock types would depend on site characteristics, the composition of the original stand and remaining overstory, projected future management of each stand, and distribution of root disease infection. Harvested areas having identified root disease would be planted with species either resistant or immune to the disease, or in a manner that would reduce spread of the disease. Animal damage control measures would be implemented to reduce animal populations when they reach levels that threaten forest stands. A district Animal Control Plan would be developed through an interdisciplinary team approach, and in coordination with the Oregon Department of Fish and Wildlife. The plan would address animals such as mountain beaver, black bear, deer, and elk.

## **Management of Young Stands**

During the first 10-15 years after planting, understory stands would receive treatments as necessary and as funding allows to promote their establishment, survival, and growth. The treatments would involve managing competing vegetation, preventing excessive animal damage, and managing overstory density. These treatments would include, but not be limited to, manual cutting of brush and seedling protection measures.

When funding is available, suitable stands aged 10-20 years may receive treatments designed to improve their growth, value, and wood quality. These treatments may include release, precommercial thinning, and pruning. Consideration will be given to retention of the natural species composition of the stand.

## **Density Management Thinnings**

Stands approximately 30-110 years of age would be considered for density management thinnings. An individual stand may be thinned 3-4 times at intervals of 20-30 years, within one 150-year rotation.

The purposes of density management may include one or more of the following: to accelerate growth of trees which would later provide large-diameter snags and down logs; to promote development of understory vegetation and multiple canopy layers; to produce larger, more valuable logs, to harvest mortality of small trees as the stand develops; to maintain good crown ratios and stable, windfirm trees; and to manage species composition.

The decision to thin a particular stand would depend on site-specific factors such as slope and topography, distance to roads, soil types, stand density, species composition, average tree diameter, degree of structural variability in the stand, and forest health considerations. Pruning of selected trees may be considered to increase their future value.

## **Management of Overstory Trees, Snags, and Large Woody Debris**

During partial-cut or regeneration harvests, existing snags would be reserved from cutting whenever feasible and to the extent necessary to meet snag habitat objectives. Some snags would need to be removed, however, for safety reasons, for road construction, or to make way for log yarding in some situations.

The trees reserved from regeneration harvest would not normally be considered available for future harvest. Some may be damaged or killed during slash burning, while others may blow down or break off during windstorms. Such trees would become part of the supply of snags and large woody debris. Most reserved trees would likely survive and grow, providing substantial structural and functional habitat diversity as the canopies of younger stands develop beneath them.



## Selection of Harvest Areas

Listed below are harvest area selection guidelines for regeneration harvest and density management thinning.

### Regeneration Harvest

Treatment areas would be selected from mature stands having the least degree of late-successional forest structure. In addition, the more productive stands would be deferred so that the less productive stands would be harvested first, when feasible. Stands that appear to have low stocking, damage, disease, generally low growth rates, or a predominance of noncommercial species resulting from past management would receive higher priority for harvest.

### Density Management Thinnings

Treatment areas would be selected from well-stocked stands where density reduction is needed to promote development of late-successional forest structure. This would generally be stands which are predominantly even-aged, evenly spaced, and of a fairly uniform diameter and height. Selection of thinning areas would also depend on access and logging feasibility.

### Landscape Design

Harvest units, including regeneration harvest and density management thinnings, would be placed where needed to meet landscape objectives on three levels of scale: the physiographic province, the landscape block or subwatershed, and the stand.

### Regeneration Harvest Design

Silvicultural prescriptions for regeneration harvest would be based on knowledge of plant communities, successional relationships, and ecosystem functions with consideration of forest health. Knowledge of these relationships would be used to help prevent vegetation management problems. Harvest plans would provide for maintenance of long-term site productivity and forest health.

Regeneration harvest units would vary in size, depending on factors such as ownership, topography, reserve boundaries, other land use allocations, and road locations. Appropriate treatment areas would be determined through watershed analysis.

Harvest unit shapes would be irregular, conforming where possible to topographic features, but limited in many cases by logging feasibility, reserve boundaries, other land use allocations, and ownership boundaries. An average of 12 to 18 green coniferous trees per acre would be reserved from harvest as clumps, strips, and scattered individual trees. The distribution of reserved trees would be designed to help meet habitat goals and to minimize interference with log yarding. Some trees reserved for snag recruitment may be topped, girdled, or felled over time to help meet long-range goals for snags and large woody debris.

Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be regeneration harvested, the prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

### Partial-Cut Harvest Design

Density management thinnings would generally be designed to encourage rapid development of vertical and horizontal stand diversity. To accomplish this, a stand might be thinned before relative density exceeds 0.55, leaving a residual relative density of approximately 0.35. Patches of denser forest would be retained in some places to meet particular wildlife habitat criteria. Depending on stand age and the specific objectives of thinning,



stand density after thinning may range from approximately 30 to 200 trees per acre. Density management areas would vary in size, depending on factors such as operability and site conditions. Appropriate treatment areas would be determined through watershed analysis. A variety of treatment intensities may be designated within a thinning unit to reflect current within-stand spatial patterns or to meet stand development objectives.

For example, some dense patches of perhaps 0.25 acre to several acres may be reserved from cutting. Other patches of 0.5 to 1 acre may be completely removed as group selections, and those areas planted with tree seedlings after the thinning is completed. Group selection patches larger than one acre in size would contain reserved trees and snags as provided in regeneration harvest units.

In each density management thinning entry, some of the larger codominant and dominant trees may be removed.

Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be thinned, the prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

## Late-Successional Reserves

Forest stands less than 80 years of age within the Late-Successional Reserves would be considered for silvicultural treatments where stocking, structure, or composition are expected to prevent or significantly retard development of late-successional conditions. Such stands would generally be composed of trees less than 10 to 20 inches diameter at breast height, and would show no significant development of a multiple-canopy forest structure. Stands that have, or will soon develop, desired late-successional structure would not be treated unless such treatment is necessary to accomplish risk-reduction objectives as described below.

## Silvicultural Treatments

Late-Successional Reserve Assessments will assist in the determination of activities to be conducted. Late-Successional Reserve Assessments are subject to Regional Ecosystem Office review. Within Late-Successional Reserves, silvicultural treatments should be beneficial to the creation of late-successional forest conditions and could include density management and reduction of large-scale disturbance risk. Silvicultural prescriptions will provide for the retention of down logs necessary for ecological function. Harvest systems utilized will be consistent with the BMPs described in Appendix D.

## Density Management

Density management prescriptions would be designed to produce stand structure and components associated with late-successional conditions, including large trees, snags, down logs, and variable-density, multi-storied, multi-species stands.

By removing a portion of the stand, the remaining trees would be provided room to maintain or increase diameter growth rates. In addition, openings in the canopy would permit development of an understory of seedlings and saplings and other vegetation. Some overstory trees may be converted to snags over time, to help meet snag habitat targets, or felled to provide large woody debris. Trees cut but surplus to habitat needs would be removed for commercial use.

A wide variety of silvicultural practices would be employed as needed to meet stand and Late-Successional Reserve objectives. Silvicultural activities would be conducted in suitable stands, whether or not the action would generate a commercial return.

In general, acres treated would be limited to five percent of the total area in any Late-Successional Reserve in the initial 5-year period of implementation unless the need for larger-scale actions is explicitly justified.



Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be thinned, the prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

### Reduction of Large-Scale Disturbance Risk

In some areas, stands would be made less susceptible to natural disturbances by focusing salvage activities on reduction of catastrophic insect, disease, and wildfire threats, and by designing treatments to provide effective fuel breaks wherever possible. These treatments would be designed so as not to result in degradation of currently suitable spotted owl habitat or other late-successional conditions.

Risks would be reduced in older stands if the proposed management activity would clearly result in greater assurance of long-term maintenance of habitat; is clearly needed to reduce risks; and would not prevent Late-Successional Reserves from playing an effective role in attaining the objectives for which they were established.

Unless exempted from review, proposed risk reduction projects would be submitted to the Regional Ecosystem Office.

## Riparian Reserves

Some stands within the Riparian Reserves would be considered for silvicultural treatments that would contribute to meeting objectives of the Aquatic Conservation Strategy.

### Silvicultural Treatments

In Riparian Reserves, the watershed analysis will assist in development of silvicultural treatments and would include density management and conifer underplanting. Silvicultural prescriptions will provide for the retention of down logs necessary for ecological function. Harvest systems utilized will be consistent with the BMPs described in Appendix D.

### Density Management

Stands where portions of young, even-aged conifer plantations are located within the Riparian Reserves would be considered for density management treatments. The objectives of such treatment would be to promote development of large conifers, to recruit large woody debris, to improve diversity of species composition and stand density, and to promote forest health. Merchantable logs would be removed where such action would not be detrimental to the purposes for which the Riparian Reserves were established.

Where root diseases such as laminated root rot (*Phellinus weirii*), black stain (*Ceratocystis verticicladiella*), or Port-Orford-cedar root rot (*Phytophthora lateralis*) are present in stands to be thinned, the prescription will incorporate state-of-the-art recommendations for treatment. Openings created will be planted with seedlings of species either resistant or immune to the disease, or in a manner that would reduce the rate of disease spread.

### Conifer Underplanting

Where hardwood stands dominate streamside areas and there is a lack of large conifers to provide inputs of large wood for instream structure, efforts would be made to re-establish scattered conifers within the Riparian Reserve. This would involve cutting or girdling some hardwoods to create openings in the canopy, followed by cutting of brush and planting of a variety of conifer seedlings in the openings created. In most cases, follow-up stand maintenance treatments would be necessary to ensure successful establishment of an adequate number of conifers in the riparian area.



# Timber Harvest and Management Details

Table E-1 displays the expected average annual harvest in both MMBF and MMCF for decades 1, 2, 3, 5, and 10. Table E-2 displays the expected average annual harvest in both acres and MMCF and the amount of harvest associated with regeneration harvest and commercial thinning or density management for each management area.

**Table E-1. Expected Average Annual Harvest**

| Decade           | MMCF <sup>1</sup> | MMBF | MMBF/MMCF Ratio |
|------------------|-------------------|------|-----------------|
| 1 <sup>st</sup>  | 5.33              | 32.1 | 6.02            |
| 2 <sup>nd</sup>  | 5.33              | 32.3 | 6.06            |
| 3 <sup>rd</sup>  | 5.33              | 32.1 | 6.02            |
| 5 <sup>th</sup>  | 5.33              | 31.0 | 5.81            |
| 10 <sup>th</sup> | 5.33              | 31.0 | 5.81            |

<sup>1</sup> Even flow is based on MMCF of conifer volume.

**Table E-2. Expected Average Annual Harvest (acres and MMCF <sup>1</sup>)**

|                                 | Decade          |             |                 |             |                 |             |                 |             |                  |             |
|---------------------------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|------------------|-------------|
|                                 | 1 <sup>st</sup> |             | 2 <sup>nd</sup> |             | 3 <sup>rd</sup> |             | 5 <sup>th</sup> |             | 10 <sup>th</sup> |             |
|                                 | Ac.             | MMCF        | Ac.             | MMCF        | Ac.             | MMCF        | Ac.             | MMCF        | Ac.              | MMCF        |
| Connectivity/Diversity Blocks   |                 |             |                 |             |                 |             |                 |             |                  |             |
| Regeneration Harvest            | 27              | .15         | 33              | .12         | 41              | .23         | 33              | .22         | 42               | .29         |
| Density Management              | 27              | .07         | 11              | .02         | 93              | .19         | 5               | .01         | 8                | .02         |
| General Forest Management Areas |                 |             |                 |             |                 |             |                 |             |                  |             |
| Regeneration Harvest            | 552             | 4.24        | 723             | 4.96        | 749             | 4.61        | 632             | 4.93        | 447              | 4.23        |
| Commercial Thinning             | 588             | .87         | 103             | .23         | 149             | .30         | 128             | .17         | 356              | .79         |
| <b>Total</b>                    | <b>1,194</b>    | <b>5.33</b> | <b>870</b>      | <b>5.33</b> | <b>1,032</b>    | <b>5.33</b> | <b>798</b>      | <b>5.33</b> | <b>853</b>       | <b>5.33</b> |

<sup>1</sup> Even flow is based on MMCF of conifer volume.







# Appendix F. Coos Bay District Forest Genetics Program

For thousands of years humans have selected and used the genetic variation that is naturally present in plants and animals. Genetic diversity is the foundation for plant and animal improvement programs. Modern crop and livestock improvement programs have substantially increased yields and productivity with selection and breeding. The need for food production and natural resources is increasing as the human population increases. Genetic improvement programs have met, and will continue to help meet, these demands.

The genes in all organisms are the basis of their diversity. Genetic diversity is a key component of an ecosystem. Broad genetic diversity is considered to be an asset because variability is a buffer against change. Problems can occur when genetic diversity is too narrow. Genetic uniformity decreases resilience to change and increases the potential for problems due to pests and diseases. Environmental conditions influence the expression of the genetic code. The physical characteristics of an organism are dependent on the interaction of its genes with the environment. Ecosystems are dynamic communities which change over time, and plants and animals are impacted by the changes. Species with wide tolerances can adapt to changes, while those with narrow tolerances can be heavily impacted.

The amount and pattern of genetic diversity in a species develops in part as an organism responds to the environment. This adaptation occurs over a long period of time as the environmental conditions select either for or against specific genetic traits. Each species has a unique genetic structure. Genetic studies are conducted to describe and quantify the amount of genetic variation within a species. This information is necessary to direct management and to help guide operational projects.

Genetic diversity can be described as a natural resource. Management and conservation of genetic resources is vital for many reasons. Genetic improvement programs are a great benefit to society and genetic materials have a large economic value. Genetic material from wild stock is an important source of variability which can be infused into existing improved varieties. Many medicinal compounds are derived from plants, and there is the potential for more undiscovered uses. Conserving genetic diversity for all species allows evolutionary processes to continue within the conditions of the natural environment.

Tree improvement is the application of genetic principles and methods to forest trees. Many of the desirable traits in trees can be enhanced with tree improvement. The Bureau of Land Management has participated in cooperative tree improvement programs for forest trees in the Pacific Northwest since the late 1950s. The emphasis to date has been in improvement of growth and disease resistance. Ecosystem management principles are changing the focus of the tree improvement program. The existing tree improvement and seed orchard programs will be integrated into a broader based forest genetics program. Genetic diversity issues for many organisms will likely become more important in the future. A forest genetics program is consistent with ecosystem management principles and can be expanded to cover the genetics of other plants and animals.

This appendix describes the objectives of the forest genetics program, its present status, and proposed direction. Readers interested in technical details of the tree improvement program are referred to the *BLM Western Oregon Tree Improvement Plan* (1987). Additional information on genetic resource issues can be found in *The Value Of Genetic Resources* (Oldfield 1984) and *Genetics and Conservation Of Rare Plants* (Falk, Holsinger 1991).

## Program Objectives

The objectives of the forest genetics program underlay a broad spectrum of land management activities. The biological foundation of ecosystem management rests upon a clear understanding of the genetic diversity present within the system. The following objectives are broadly defined and include tree improvement, gene management, and gene conservation activities.



- Provide for seed production as needed for species planted on BLM-administered lands. Develop seed collection and seed deployment guidelines as needed.
- Develop genetically improved materials as needed to meet BLM's resource management objectives.
- Maintain and restore the genetic diversity within managed forest stands.
- Analyze needs and implement gene conservation strategies as appropriate.
- Collect information on genetic variation from important species.
- Contribute to the development of genetic information needed for landscape analysis, ecological assessments, research studies, and ecosystem management projects.
- Maintain flexibility within the program so that information fulfills the current needs and anticipates future needs.

## **Status of the Existing Program**

The BLM tree improvement program has generated a substantial and important genetic information base for several conifer species. The data is significant to ecosystem management because it describes the nature and extent of genetic variation present for traits of the species.

Because genetic diversity is continuous across the landscape, tree improvement programs are implemented at this level. Each program is a small ecologically similar area called a breeding unit. Most tree improvement programs are cooperatives with BLM and adjacent landowners. A cooperative structure is beneficial because it greatly increases the number of trees in the genetic base, and the trees are located across a broader geographic area. Program costs are shared among cooperators which is more efficient. BLM is cooperating in more than 50 breeding units which include several million acres of forest land in western Oregon.

The following accomplishments summarize the status of the program:

- Several conifer species (Douglas-fir, western white pine, and sugar pine) have been selected for genetically controlled characteristics such as growth rate, tree form, and resistance to disease.
- Field tests have been established using progeny of the selected trees. These progeny test sites have been measured at regular intervals.
- Seed orchards have been established using parent trees. The orchards are producing locally adapted seed for several major species (Douglas-fir, western hemlock, western red cedar, ponderosa pine, grand fir, and incense cedar).
- Each year, improved seed is sown for replanting a portion of the harvested forest acres.
- The seed orchards are managed for seed production. Stimulation techniques are part of the management to encourage cone production. Trees that have slow growth in field tests or show undesirable characteristics are removed from the orchard. This practice is known as "roguing."
- Second generation programs have been initiated in some breeding units. Selection and breeding work is underway.
- Facilities for cone and seed processing and greenhouses for growing custom tailored lots of many species are located at the seed orchards.



# Proposed Program Direction

The future forest genetics program will be more complex under ecosystem management than under the previous management plans. Improvement of growth and disease resistance will continue as an important component of the forest genetics program. Gene conservation and gene resources management issues will be emphasized to a greater degree. Gene conservation involves taking specific actions to conserve the genetic variation of a species with the purpose of maintaining the range of natural diversity within the species. Gene management is the integration of genetic principals into resource management actions. Because ecosystems are complex, genetic diversity is important for all organisms. Genetic principles must be considered when planning and implementing resource management projects so that genetic diversity is maintained.

The following is a summary of the direction for the forest genetics program:

- Progeny test sites will be maintained, measurements of growth and other characteristics will continue, and long-term management plans for the sites will be developed.
- Seed orchards will be maintained and managed to produce seed as needed for ecosystem management projects.
- Improved stock will be planted on most of the harvested acres.
- Tree improvement programs have emphasized cooperative efforts for operational programs and research studies with state, private, and other government agencies. These partnerships will continue.
- Genetic expertise and genetically appropriate guidelines will be provided for ecosystem management implementation.
- A forest genetic plan will be prepared. It will include a strategy for gene conservation, maintenance of genetic diversity, and definition of a monitoring baseline to quantify genetic variation.

Ecosystem management concepts have challenged the forest genetics program with more issues than were addressed by the previous forest management plans. The former program must be meshed with the additional needs defined by ecosystem management so previous gains are maintained and future needs are addressed. Policy and land use allocations will likely change over time. A flexible broad-based forest genetics program is the best option to accommodate changing conditions. Tree improvement, gene management, and gene conservation objectives share a common genetic basis. Since each aspect of the program can complement the others, all aspects should include provisions for maintaining and enhancing genetic diversity. Tree improvement programs are intensive management practices that can achieve higher productivity and help meet the demand for wood products; genetic information is needed to support and guide ecosystem management projects; and conservation of genetic diversity is vital to ecosystem health and stability.







# **Appendix G. Proposed Restrictions and Requirements on Mineral and Energy Exploration and Development Activity**

## **Introduction**

This appendix discusses the leasing stipulations as they will be applied to BLM-administered lands in the planning area under the Resource Management Plan (RMP). Operating standards pertinent to locatable and salable minerals are also described. Mineral exploration and development on federal lands must also comply with laws and regulations administered by several agencies of the State of Oregon; however, these requirements are not discussed in this document.

## **Leasable Mineral Resources**

### **Oil and Gas Leasing**

The Mineral Leasing Act of 1920 (as amended) provides that all publicly-owned oil and gas resources be open to leasing unless a specific land order has been issued to close the area. Through the land use planning process, the availability of these resources for leasing is analyzed, taking into consideration development potential and surface resources. Constraints on oil and gas operations are identified and placed in the leases as notices and stipulations. Oil and gas leases are then issued from the BLM Oregon State Office in Portland. Specific proposed notices and stipulations are listed by alternative later in this appendix.

The issuance of a lease conveys to the lessee an authorization to actively explore and/or develop the lease, in accordance with the attached stipulations and the standard terms outlined in the Federal Onshore Oil and Gas Leasing Reform Act. Restrictions on oil and gas activities in the planning area will take the form of timing limitations, controlled surface use, or “no surface” occupancy stipulations used at the discretion of the Authorized Officer to protect identified surface resources of special concern. Stipulations will be attached to each lease before it is offered for sale by the field office that reviews the lease tract. The review will be conducted by consulting the direction given in this resource management plan. In addition, all BLM-administered lands within the planning area will be subject to the lease notices as shown on the following pages. Every attempt will be made to place stipulations in the lease and to minimize use of Standard Conditions of Approval attached to the site-specific permit. All federal lessees or operators are required to follow procedures set forth by: Onshore Oil and Gas Orders, Notice to Lease (NTLs), The Federal Oil and Gas Royalty Management Act (as amended), The Federal Onshore Oil and Gas Leasing Reform Act, and Title 43 Code of Federal Regulations, (Part 3100).

### **Oil and Gas Operations**

#### **Geophysical Explorations**

Geophysical operations may be conducted regardless of whether the land is leased or not. Notices to conduct geophysical operations on BLM surface are received by the resource area. Administration and surface protection are accomplished through close cooperation of the operator and the BLM. Seasonal restrictions may be imposed to reduce fire hazards, conflicts with wildlife, watershed damage, etc. An operator is required to file a “Notice of Intent to Conduct Oil and Gas Exploration Operations” for all geophysical activities on public land administered by BLM. The notice should adequately show the location and access routes, anticipated surface damages, and time frame. The operator is required to comply with written instructions and orders given by the Authorized Officer; the operator must also be bonded. Signing of the Notice of Intent by the operator signifies agreement to comply with the terms and conditions of the notice, regulations, and other requirements prescribed by the Authorized Officer. A prework conference and/or site inspection may be required. Periodic checks during



and upon completion of the operations will be conducted to ensure compliance with the terms of Notice of Intent, including reclamation.

### Drilling Permit Process

The federal lessee or operating company selects a drill site based on spacing requirements, subsurface and surface geology, geophysics, topography, and economic considerations. Well spacing is determined by the Authorized Officer after considering topography, reservoir characteristics, protection of correlative rights, potential for well interference, interference with multiple use of lands, and protection of the surface and subsurface environments. Close coordination with the State would take place. Written field spacing orders are issued for each field. Exceptions to spacing requirements involving federal lands may be granted after joint State and BLM review.

### Notice of Staking

Once the company makes the decision to drill, they must decide whether to submit a Notice of Staking (NOS) or apply directly for a permit to drill. The NOS is an outline of what the company intends to do, including a location map and sketched site plan. The NOS is used to review any conflicts with known critical resource values and to identify the need for associated rights-of-way and special use permits. The BLM utilizes information contained in the NOS and obtained from the onsite inspection to develop stipulations to be incorporated into the application for permit to drill. Upon receipt of the NOS, the BLM posts the document and pertinent information about the proposed well in the District Office for a minimum of 30 days prior to approval, for review and comment by the public.

### Application for Permit to Drill (APD)

The operator may or may not choose to submit an NOS; in either case, an Application for Permit to Drill (APD) must be submitted prior to drilling. An APD consists of two main parts: a 12-point surface plan that describes any surface disturbances and is subject to review by resource specialists for adequacy with regard to lease stipulations designed to mitigate impacts to identified resource conflicts with the specific proposal; and an 8-point subsurface plan which details the drilling program and is reviewed by the staff mineral specialist or geologist. This plan includes provisions for casing, cementing, well control, and other safety requirements. For the APD option, the onsite inspection is used to assess possible impacts and to develop stipulations to minimize these impacts. If the NOS option is not utilized, the 30-day posting period begins with the filing of the APD. Private surface owner input is actively solicited during the APD stage.

### Geothermal Leasing

The Geothermal Steam Act of 1970 (as amended) provides for the issuance of leases for the development and utilization of geothermal steam and associated geothermal resources. Geothermal leasing and operational regulations are contained in Title 43 CFR, Part 3200. Through the land use planning process, the availability of the geothermal resources for leasing is analyzed, taking into consideration development potential and surface and subsurface resources. Constraints on geothermal operations are identified and placed in the leases as stipulations. Geothermal leases are then issued by the BLM Oregon State Office in Portland.

Geothermal resources within a known geothermal resource area (KGRA) are offered by competitive sale. Outside of KGRA, leases can be issued non-competitively (over-the-counter). Prior to a competitive lease sale, or the issuance of a non-competitive lease, each tract will be reviewed and appropriate lease stipulations will be included. The review will be conducted by consulting the direction given in the RMP. The issuance of a lease conveys to the lessee authorization to actively explore and/or develop the lease in accordance with regulations and lease terms and attached stipulations. Subsequent lease operations must be conducted in accordance with the regulations, Geothermal Resources Operational Orders, and any Conditions of Approval developed as a result of site-specific NEPA analysis. In the planning area, restrictions in some areas will include timing limitations, controlled surface use, or no surface occupancy stipulations used at the discretion of the Authorized Officer to protect identified surface resources of special concern.



In addition to restrictions related to the protection of surface resources, the various stipulations and conditions could contain requirements related to protection of subsurface resources. These may involve drainage protection of geothermal zones, protection of aquifers from contamination, or assumption of responsibility for any unplugged wells on the lease.

Development of geothermal resources can be done only on approved leases. Orderly development of a geothermal resource, from exploration to production, involves several major phases that must be approved separately. Each phase must undergo the appropriate level of NEPA compliance before it is approved and any subsequent authorization is issued.

## **Leasing Stipulation Summary**

The mineral leasing notices and stipulations for the RMP are shown on the following pages. Those notices and stipulations are to be the minimum necessary to issue leases in the operating area. The standard leasing stipulations (Form 3100-11) alone would be utilized on most lands. The powersite stipulation (Form 3730-1) would be used on all lands included within powersite withdrawals, and the stipulation found on Form 3109-2 would be utilized for all lands under the jurisdiction of the Department of the Army, Corps of Engineers. Lease notices to protect threatened and endangered plant and animal species, and cultural resources, would apply to all lands administered by BLM in the planning area. A controlled surface use (CSU) special stipulation would be utilized to protect fragile soils on slopes exceeding 60 percent and to control visual impacts on VRM Class II areas. No surface occupancy (NSO) special stipulations would be utilized on the following areas: lands included within R&PP and FLPMA leases; developed and proposed recreation areas and sites; Riparian Reserves; regional forest nutritional research study installations; various land use authorizations and special areas (ACECs, RNAs, and EEAs); New River; Dean Creek Elk Viewing areas; The North Spit; lands classified as VRM Class I; snowy plover nest sites, Aleutian goose use areas, and critical habitat of other threatened or endangered species found on the district.

The regulation in 43 CFR 3101.1-2 permits the BLM to require relocation of proposed oil and gas operations up to 200 meters, so No Surface Occupancy leasing stipulations are not necessary to protect Regional Forest Nutritional Research Study Installations, progeny test sites, bald eagle nest and roost sites and associated habitat, and marbled murrelet nest sites.

Special Status Species (federal threatened and endangered, proposed federal threatened and endangered, federal candidate, Bureau sensitive, and state threatened and endangered) would be protected by a special stipulation that will be attached to all mineral leases on BLM-administered land in the Coos Bay District.

SEIS Special Attention Species would be protected by a special stipulation which would be attached to all mineral leases on BLM-administered land in the Coos Bay District.

The following notices and special leasing stipulations would be applied to the BLM-administered lands within the planning area in addition to those described above:

- No Surface Occupancy stipulations to protect great blue heron rookeries.
- Timing stipulations to protect raptor nests and osprey nest sites.
- Controlled surface use stipulations to protect Late-Successional and Riparian Reserves, key watersheds and Connectivity/Diversity Blocks, special recreation management areas, and managed rural interface areas.

Each stipulation also includes waivers, exceptions, and modifications defined as follows:

**Waiver -** The lifting of a stipulation from a lease which constitutes a permanent revocation of the stipulation from that time forward. This is usually a substantial change and requires a 30-day posting of the action for public involvement before the permitting activity associated with the process can be approved.



- Exception - This is a one time lifting of the stipulation to allow a permitting activity for a specific proposal. It has no permanent effect on the lease stipulation, would not constitute a substantial change to the stipulation, and requires no posting.
- Modification - This is a change to a stipulation which either temporarily suspends the stipulation requirement or permanently lifts the application of the stipulation on a given portion of the lease. It may or may not require posting based on whether or not the change is determined to be substantial by the Authorized Officer.

## **Leasing Notices and Stipulations**

### **1. Standard Leasing Stipulations**

- a. Standard stipulations for oil and gas, which are listed in Section 6 of "Offer to Lease and Lease for Oil and Gas" (Form No. 3100-11), are as follows:

Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air and water; to cultural, biological, visual and other resources; and to other land uses or users. Lessee shall take reasonable measures deemed necessary by lessor to accomplish the intent of this section. To the extent consistent with lease rights granted, such measures may include, but are not limited to, modification to siting or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.

Prior to disturbing the surface of the leased lands, lessee shall contact BLM to be apprised of procedures to be followed and modifications or reclamation measures that may be necessary. Areas to be disturbed may require inventories or special studies to determine the extent of impacts to other resources. Lessee may be required to complete inventories or short-term special studies under guidelines provided by lessor. If in the conduct of operations, threatened or endangered species, objects of historic or scientific interest, or substantial unanticipated environmental effects are observed, lessee shall immediately contact lessor. Lessee shall cease any operations that would result in the destruction of such species or objects until appropriate steps have been taken to protect the site or recover the resources as determined by BLM in consultation with other appropriate agencies.

- b. Standard stipulations for geothermal leasing, found in Section 6 of "Offer to Lease and Lease for Geothermal Resources" (Form 3200-24), are very similar to those described above for oil and gas leasing.

### **2. Powersite Stipulation (Form No. 3730-1) is to be utilized on all lands within powersite reservations.**

### **3. Stipulation for Lands Under Jurisdiction of Department of the Army, Corps of Engineers (Form No. 3109-2) are as follows:**

All areas within 2,000 feet of any major structure—including but not limited to dams, spillways, or embankments—are restricted areas. The lessee, his operators, agents, or employees shall not disturb the surface or subsurface estates of the restricted areas. If the Commander or the authorized representative discovers an imminent danger to safety or security that allows no time to consult the BLM, that person may order such activities stopped immediately. The Authorized Officer of the BLM shall review the order and determine the need for further remedial action. Platform drilling over water areas (flood pool/drawdown zone) is prohibited; the method of drilling shall be directional from an off-site base. This restriction is required because occupancy would negatively affect or interfere with authorized project purposes and/or operational needs as listed below:

Fish and Wildlife Habitat - Power Production  
Flood Control - Recreation  
Irrigation - Water Quality



Navigation - Water Supply  
Other Legislative Authorities

Land surface occupancy may be permitted within the lease area; however, directional drilling from an off-site base may be required. The Secretary of the Army or designee reserves the right to require cessation of operations if a national emergency arises. Upon request of approval from higher authority, the Commander will give the lessee written notice, or if time permits, request the BLM to give notice of the required cessation.

#### 4. Lease Notices

The following Notices are to be issued with each lease for all lands administered by BLM within the planning area. Lease notices are attached to leases in the same manner as stipulations; however, there is an important distinction between lease notices and stipulations. Lease notices do not involve new restrictions or requirements. Any requirements contained in a lease notice must be fully supported in either laws, regulations, policy, or onshore oil and gas orders.

##### Notice - Wildlife

###### Notice

Wildlife - Threatened or Endangered Species Nest Sites and Nesting Habitat

The leased lands are in an area suitable for the habitat of the (*scientific name*), (*common name*) animal species which is listed as a threatened or endangered species, or is a candidate species proposed for listing.

All viable habitat will be identified for the lessee/operator by the Authorized Officer of the BLM during the preliminary environmental review of the proposed surface use plan. If the field examination indicates that the proposed activity may affect the species, then consultation will be conducted with the U.S. Fish & Wildlife Service pursuant to Sec. 7 of the Endangered Species Act of 1973, as amended. The consultation will determine whether or not the proposed activity would jeopardize the continued existence of the species, and, if so, the extent, if any, the proposed activity will be allowed.

Authority: The Endangered Species Act of 1973.

Table C-3 in Appendix C lists the threatened and endangered animal species known or suspected to occur in the Coos Bay District.

##### Notice - Plants

###### Notice

Resource: Special Status Plant Species

The leased lands are in an area suitable for the habitat of the (*scientific name*), (*common name*) plant species listed below which is considered as federal candidate species.

All viable habitat will be identified for the lessee/operator by the Authorized Officer of the BLM during the preliminary environmental review of the proposed surface use plan. If the field examination indicated that the proposed activity may affect the species, then BLM policy directs that technical assistance be obtained from the U.S. Fish & Wildlife Service to ensure that actions will not increase the need to list the species as threatened or endangered species.

Authority: The Endangered Species Act of 1973.

Table C-2 in Appendix C lists the threatened and endangered plant species known or suspected to occur in the Coos Bay District.



**Notice - Cultural Resources**

**Notice**

Cultural Resources: An inventory of the leased lands would be required prior to surface disturbance to determine if cultural resources are present and to identify needed mitigation measures. Prior to undertaking any surface-disturbing activities on the lands covered by this lease, the lessee or operator shall:

1. Contact the Surface Management Agency (SMA) to determine if a cultural resource inventory is required. If an inventory is required, then:
2. The lessee or operator will complete the required inventory; or at their option, may engage the services of a cultural resource consultant acceptable to the SMA to conduct a cultural resource inventory of the area of proposed surface disturbance. The operator may elect to inventory an area larger than the standard 10-acre minimum to cover possible site relocation which may result from environmental or other considerations. An acceptable inventory report is to be submitted to the SMA for review and approval no later than that time when an otherwise complete application for approval of drilling or subsequent surface-disturbing operation is submitted.
3. Implement mitigation measures required by the SMA. Mitigation may include the relocation of proposed lease-related activities or other protective measures such as data recovery and extensive recordation. Where impacts to cultural resources cannot be mitigated to the satisfaction of the SMA, surface occupancy on that area must be prohibited. The lessee or operator shall immediately bring to the attention of the SMA any cultural resources discovered as a result of approved operations under this lease, and shall not disturb such discoveries until directed to proceed by the SMA.

Authorities: Compliance with Section 106 of the National Historic Preservation Act is required for all actions that may affect cultural properties eligible to the National Register of Historic Places. Section 6 of the Oil and Gas Lease Terms (Form 3100-11) requires that operations be conducted in a manner that minimizes adverse impacts to cultural and other resources.

**5. Leasing Stipulations**

The following special stipulations are to be utilized on specifically designated tracts of land as described under the RMP.

**NSO - Land Use**

**No Surface Occupancy**

Resource: Land Use Authorizations

Stipulation: Surface occupancy and use is prohibited on Recreation and Public Purposes (R&PP) or FLPMA leases.

Objective: To protect uses on existing R&PP and FLPMA leases.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The area affected by this stipulation may be modified by the Authorized Officer if the land use authorization boundaries are modified.

Waiver: This stipulation may be waived by the Authorized Officer if all land use authorizations within the leasehold have been terminated, canceled, or relinquished.



**NSO - Recreation**

**No Surface Occupancy**

Resource: Recreation

Stipulation: Surface occupancy and use is prohibited within the (developed or potential site name) recreation sites/areas.

Objective: To protect developed and potential recreation sites and areas.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified by the Authorized Officer if the recreation site/area boundaries are changed.

Waiver: This stipulation may be waived if the Authorized Officer determines that the entire leasehold no longer contains developed or potential recreation sites/areas.

**NSO - Special Areas**

**No Surface Occupancy**

Resource: Special Areas

Stipulation: Surface occupancy and use is prohibited within Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), or Environmental Education Areas (EEAs).

Objective: To protect important historic, cultural, scenic values, natural resources, natural systems or processes, threatened and endangered plant and animal species, and/or natural hazard areas of the ACEC, RNA or EEA.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified by the Authorized Officer if the ACEC, RNA or EEA boundaries are changed.

Waiver: This stipulation may be waived if the Authorized Officer determines that the entire leasehold no longer contains designated ACECs, RNAs or EEAs.

**NSO - Research**

**No Surface Occupancy**

Resource: Regional Forest Nutritional Research Study Installations

Stipulation: Surface occupancy and use is prohibited within regional forest nutritional research study installations.

Objective: To protect regional forest nutritional research study installations.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified by the Authorized Officer if the regional forest nutritional research study installation boundaries are changed.



## **Appendix G**

Waiver: This stipulation may be waived if the Authorized Officer determines that the entire leasehold no longer contains regional forest nutritional research study installations.

### **NSO - Progeny Sites and Seed Orchards**

#### **No Surface Occupancy**

Resource: Progeny plantation sites and seed orchards.

Stipulation: Surface occupancy and use is prohibited within progeny plantation sites or seed orchards.

Objective: To protect progeny plantation sites and seed orchards.

Exception: None.

Modification: The boundaries of the stipulated area may be modified by the Authorized Officer if the progeny plantation site or seed orchard boundaries are changed.

Waiver: This stipulation may be waived if the Authorized Officer determines that the entire leasehold no longer contains progeny plantation sites or seed orchards.

### **NSO - VRM (Class I)**

#### **No Surface Occupancy**

Resource: Visual Resource Management (VRM) Class I

Stipulation: Surface occupancy and use is prohibited in VRM Class I areas.

Objective: To preserve the existing character of the landscape.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan demonstrating that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified by the Authorized Officer if the boundaries of the VRM Class I area are changed.

Waiver: This stipulation may be waived by the Authorized Officer if all VRM Class I areas within the leasehold are reduced to a lower VRM class. Areas reduced to a lower VRM class will be subject to the Controlled Surface Use stipulation for visual resources.

### **NSO - Wildlife (Threatened/Endangered Bird Species)**

#### **No Surface Occupancy**

Resource: Wildlife - Bald Eagle, Peregrine Falcon, Northern Spotted Owl, Snowy Plover, Marbled Murrelet, and Aleutian Canada Goose nest sites and nesting habitat and important feeding and concentration habitat.

Stipulation: Surface occupancy and use is prohibited within (Distance in yards/miles) of known nest sites which have been active within the past seven years, within nesting habitat in riparian areas, and within the designated boundaries of habitat.

Objective: To protect nesting sites and/or nesting habitat and critical habitat in accordance with the Endangered Species Act (ESA).

Exception: An exception may be granted by the Authorized Officer if the operator submits a plan which demonstrates that the proposed action will not affect species or its habitat. If the Authorized Officer determines



that the action may or will have an adverse effect on the species, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM in consultation or conferencing with the U.S. Fish and Wildlife Service (USFWS).

**Modification:** The boundaries of the stipulated area may be modified if the Authorized Officer, in consultation with USFWS, determines that portion of the area can be occupied without adversely affecting nest sites or nesting and critical habitat.

**Waiver:** This stipulation may be waived if the Authorized Officer, in consultation with USFWS, determines that the entire leasehold can be occupied without adversely affecting nest sites or nesting habitat and other critical habitat, or if the species is declared recovered and is no longer protected under the ESA.

#### **NSO - Wildlife (Great Blue Heron and Osprey)**

##### **No Surface Occupancy**

**Resource:** Wildlife - Great Blue Heron rookery and Osprey nests and nest habitat.

**Stipulation:** Surface occupancy and use is prohibited within 250 yards of known great blue heron rookeries and within 0.5 mile of osprey nest sites that have been active within the past seven years.

**Objective:** To protect great blue heron rookeries and osprey nest sites.

**Exception:** An exception may be granted by the Authorized Officer if the operator submits a plan which demonstrates that the proposed action will not affect the above species or its habitat. If the Authorized Officer determines that the action may or will have an adverse effect on the species, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan must be approved by BLM.

**Modification:** The boundaries of the stipulated area may be modified if the Authorized Officer determines that portion of the area can be occupied without adversely affecting the above species or its habitat.

**Waiver:** This stipulation may be waived if the Authorized Officer determines that the entire leasehold can be occupied without adversely affecting great blue heron or osprey nest sites.

#### **NSO - Riparian Reserves and Key Watersheds**

##### **No Surface Occupancy**

**Resource:** Riparian Reserves and Key Watersheds.

**Stipulation:** Unless otherwise authorized, drill site construction and access through Riparian Reserves and key watersheds within this leasehold will be limited to established roadways.

**Objective:** To protect riparian vegetation and reduce erosion adjacent to water courses.

**Exception:** An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

**Modification:** The area affected by this stipulation may be modified by the Authorized Officer if it is determined that portions of the area do not include Riparian Reserves and key watersheds, floodplains, or water bodies.

**Waiver:** This stipulation may be waived by the Authorized Officer if it is determined that the entire leasehold does not include Riparian Reserves and key watersheds.



**CSU - Soils**

**Controlled Surface Use**

Resource: Soils

Stipulation: Prior to disturbance of slopes over 60 percent, an engineering/reclamation plan must be approved by the Authorized Officer. Such plan must demonstrate how the following will be accomplished:

- Site productivity will be restored.
- Surface runoff will be adequately controlled.
- Off-site areas will be protected from accelerated erosion, such as rilling, gullying, piping, and mass wasting.
- Water quality and quantity will be in conformance with state and federal water quality laws.
- Surface-disturbing activities will not be conducted during extended wet periods.
- Construction will not be allowed when soils are frozen.
- Additional state requirements would be incorporated into the engineering/reclamation plan.

Objective: To maintain soil productivity; provide necessary protection to prevent excessive soil erosion on steep slopes; and avoid areas subject to slope failure, mass wasting, piping, or having excessive reclamation problems.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that the impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The area affected by this stipulation may be modified by the Authorized Officer if it is determined that portions of the area do not include slopes over 60 percent.

Waiver: This stipulation may be waived by the Authorized Officer if it is determined that the entire leasehold does not include slopes over 60 percent.

**CSU - VRM (Class II)**

**Controlled Surface Use**

Resource: Visual Resource Management (VRM) Class II.

Stipulation: All surface-disturbing activities, and semipermanent and permanent facilities in VRM Class II areas may require special design including location, painting, and camouflage to blend with the natural surroundings and to meet the visual quality objectives for the area.

Objective: To control the visual impacts of activities and facilities within acceptable levels.

Exception: None.

Modification: None.

Waiver: This stipulation may be waived if the Authorized Officer determines that there are no VRM Class II areas in the leasehold.



## CSU - Special Status Species

### Controlled Surface Use

Resource: Special Status Plant or Animal Species

Stipulation: Unless otherwise authorized, drill site construction and access through habitat of (scientific name), (common name), a (federal candidate, state listed or bureau sensitive) species, within the leasehold will be limited to designated roadways.

Objective: To protect special status species.

Exception: An exception may be granted by the Authorized Officer if the operator submits a plan which demonstrates that the proposed action will not affect the species or its habitat. If the Authorized Officer determines that the action may or will have an adverse effect on the species, the operator may submit a plan demonstrating that the impacts can be adequately mitigated. This plan may be reviewed for technical accuracy with the U.S. Fish and Wildlife Service (USFWS).

Modification: The boundaries of the stipulated area may be modified if the Authorized Officer, based on discussions with USFWS, determines that portion of the area can be occupied without adversely affecting nest sites or habitat.

Waiver: This stipulation may be waived if the Authorized Officer, in discussing with USFWS, determines that the entire leasehold can be occupied without adversely affecting nest sites or nesting habitat and other habitat, or if the species is no longer considered to be a special status species.

Note: Special status plant species occurring on the district are listed in Appendix C Table C-2, and special status animal species are listed in Appendix C Table C-3.

## CSU - SRMA and Recreation Rivers

### Controlled Surface Use

Resource: Special Recreation Management Area (SRMA) and suitable and eligible (but not assessed) recreation rivers.

Stipulation: Unless otherwise authorized, drill site construction and access through special recreation management areas within this leasehold will be limited to established roadways.

Objective: To protect recreational qualities of the lands involved and recreational facilities, as well as enhance recreational opportunities within the designated boundary of the SRMA.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The area affected by this stipulation may be modified by the Authorized Officer if it is determined that portions of the area do not include Special Recreation Management Areas.

Waiver: This stipulation may be waived by the Authorized Officer if it is determined that the entire leasehold does not include Special Recreational Management Areas.



## CSU - Late-Successional Reserves and Connectivity/Diversity Blocks

### Controlled Surface Use

Resource: Late-Successional Reserves and Connectivity/Diversity Blocks

Stipulation: Unless otherwise authorized, drill site construction and access through Late-Successional Reserves (LSRs) or Connectivity/Diversity Blocks within this leasehold will be limited to established roadways.

Objective: To protect vegetation and to retain and/or restore old-growth forest characteristics.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The area affected by this stipulation may be modified by the Authorized Officer if it is determined that portions of the area do not include LSRs or Connectivity/Diversity Blocks.

Waiver: This stipulation may be waived by the Authorized Officer if it is determined that the entire leasehold does not include LSRs or Connectivity/Diversity Blocks.

## CSU - RIAs

### Controlled Surface Use

Resource: Managed Rural Interface Areas

Stipulation: Unless otherwise authorized, drill site construction and access through managed rural interface areas in (legal description) within the leasehold will be limited to designated roadways.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The area affected by this stipulation may be modified by the Authorized Officer if it is determined that portions of the area do not include managed rural interface areas.

Waiver: This stipulation may be waived by the Authorized Officer if it is determined that the entire leasehold does not include managed rural interface areas.

## Timing - Wildlife

### Timing Limitation

Resource: Wildlife - Raptor Nests

Stipulation: Surface use is prohibited from (date), within (distance in yards/miles) of raptor nest sites which have been active within the past two years. This stipulation does not apply to the operation and maintenance of production facilities.

Objective: To protect nest sites of raptors which have been identified as species of special concern in Oregon.

Exception: An exception to this stipulation may be granted by the Authorized Officer if the operator submits a plan which demonstrates that impacts from the proposed action are acceptable or can be adequately mitigated.

Modification: The boundaries of the stipulated area may be modified if the Authorized Officer determines that portions of the area no longer are within (distance in yards/miles) of raptor nests which have been active within the past two years. The dates for the timing restriction may be modified if new information indicates that (dates specified above) are not valid for the leasehold.



Waiver: This stipulation may be waived if the Authorized Officer determines that the entire leasehold no longer is within (distance in yards/miles) of raptor nest sites which have been active within the past two years.

## Locatable Minerals

### General

The following operational guidelines for mining activities have been compiled to facilitate in complying with the 43 CFR 3809 surface management regulations, which apply to all mining operations on BLM-administered lands in the Coos Bay District. All of the following guidelines may not apply to every mining operation. It is the mining claimant's and/or operator's responsibility to avoid "unnecessary or undue degradation" and to promptly perform all necessary reclamation work. Refer to regulations of 43 CFR 3809 for general requirements. For guidance on the reclamation of mining and exploration sites that will be followed on the Coos Bay District, refer to BLM's *Solid Mineral Reclamation Handbook* (H-3042-1).

An intergovernmental agreement between BLM and the Oregon Department of Geology and Mineral Industries was designed to avoid duplication of regulations, inspections, and approval of reclamation plans as well as minimize repetitive costs to mining operators. This agreement can be reviewed at the District Office.

The following guidelines include some, but not all, of the requirements of the various state agencies overseeing mining operations. BLM does not enforce State requirements; they are included here as information. State requirements could change during the life of the plan.

## Prospecting, Exploration and Mining

### State of Oregon Requirements

Out-of-stream mining—which disposes of all waste water by evaporation and/or seepage, with no readily-traceable discharge to ground water or surface water—that involves processing of up to 10,000 cubic yards of material per year must be authorized under General Permit # 0600 issued by the Department of Environmental Quality (DEQ). Instream use of suction dredges must be authorized by Permit # 0700-J issued by the DEQ.

Removal or alteration of over 50 cubic yards of material in any waters of the state requires a Removal-Fill permit from the Division of State Lands. This permit is required for any relocation of flowing streams in conjunction with mining.

Any person engaging in onshore mineral exploration that disturbs more than one surface acre or involves drilling to greater than 50 feet must obtain an exploration permit from the Oregon Department of Geology and Mineral Industries (DOGAMI). Mining operations involving 5,000 or more cubic yards of material per year or disturbing one or more acres of land will require an operating permit from DOGAMI.

### BLM Requirements

Operations ordinarily resulting in only negligible disturbance as defined in 43 CFR 3809.0-5(b) are considered to be "casual use" and no notification to or approval by the BLM is required. All operators proposing occupancy, timber removal, use of mechanized earth-moving equipment, operation of suction dredges having intake hoses with an inside diameter greater than four inches, or surface disturbance of five acres or less during any calendar year must provide a written notice to the district office at least 15 days prior to the commencement of any surface disturbance. For operations that will cause greater than five acres of cumulative surface disturbance, the operator is required to submit a plan of operations pursuant to the regulations in 43 CFR 3809.1-4. BLM requirements for protection of specific resource values or specific activities are listed below individually.



## **Cultural and Paleontological Resources**

Operators shall not knowingly alter, injure, or destroy any scientifically important paleontological (fossil) remains or any historical or archaeological site, structure, or object on federal lands. The operator shall immediately bring to the attention of the Authorized Officer, any paleontological (fossil) remains or any historical or archaeological site, structure, or object that might be altered or destroyed by exploration or mining operations, and shall leave such discovery intact until instructed to proceed by the Authorized Officer. The Authorized Officer shall evaluate the discovery, take action to protect or remove the resource, and allow operations to proceed.

## **Threatened and Endangered Plant/Animal Species**

Operators shall take such action as may be needed, as stipulated in guidelines developed through consultation with the U.S. Fish and Wildlife Service, to prevent adverse impacts to threatened or endangered species of plants and animals and their habitat that may be affected by operations. Under Notice-level operations, if the review of the notice by BLM reveals that a potential conflict with a threatened or endangered species exists, the operator will be advised not to proceed and informed that a knowing violation of the taking provision of the Endangered Species Act will result in a notice of noncompliance and may result in criminal penalties. If the operator wishes to develop measures that will eliminate the conflict, then the Authorized Officer will arrange for the participation of BLM resource specialists and the U.S. Fish and Wildlife Service in reviewing the proposed revision to the Notice. If processing a proposed Plan of Operations indicates that a potential conflict exists with a threatened or endangered species or its habitat, the Authorized Officer shall notify the operator that the plan cannot be approved until BLM has complied with Section 7 of the Endangered Species Act. Special status species plants and animals and their habitat will be identified by the Authorized Officer and shall be avoided wherever possible.

Appendix C provides a listing of special status species known or suspected to occur on the district.

## **Vegetation/Timber Removal**

The operator may remove and/or use only vegetation that interferes with mining activities. An application must be submitted to the Authorized Officer pursuant to 43 CFR 3821.4 describing the proposed use of merchantable timber from O&C or CBWR lands for mining purposes. No trees over six inches diameter at breast height (dbh) may be cut until the application is approved and the trees are marked. The Coos Bay BLM office recommends that small trees (e.g., less than six inches dbh) and shrubs be lopped and scattered, or shredded for use as mulch. Trees over six inches dbh are to be bucked and stacked in an accessible location, unless they are needed for the mining operation. Trees removed from the claim may not be used as payment for conversion of raw logs into dimension lumber or mine timbers.

## **Firewood**

Merchantable conifer timber may not be used for firewood. Firewood permits may be issued to the operator for use in conjunction with the mining operation, but no wood may be used until a permit is obtained from BLM. Permits will be limited to hardwoods or salvage timber that is not considered to be merchantable. Firewood authorized for use in conjunction with a mining operation is not to be removed from the mining claim.

## **Topsoil**

Topsoil and usable subsoil (usually the top 12 to 18 inches) should be carefully removed from all areas in advance of excavations or establishment of mine waste dumps and tailings dams. This material should be stockpiled and protected from erosion for use in future reclamation.

## **Roads**

Existing roads and trails should be used where possible. Temporary roads are to be constructed to a minimum width and with minimum cuts and fills. All roads shall be constructed in a manner that avoids negatively



impacting slope stability. Roads will be promptly reclaimed when no longer needed unless permission is specifically granted by the BLM to do otherwise.

## **Wetlands**

When proposed mining activities are expected to fill or alter wetland areas, the operator must contact the Department of the Army, Corps of Engineers, for the appropriate permit. A copy of the permit must be submitted to the Authorized Officer in conjunction with a Notice or Plan of Operations.

## **Water Quality**

All operators shall comply with federal and state water quality standards including the Federal Water Pollution Control Act. When mining activity is in or near bodies of water, or sediment and/or other pollutants are discharged, the State DEQ should be consulted. A discharge permit, and possibly a settling pond, will be required when mining operations have any discharge. It is the operator's responsibility to obtain any needed suction dredging, stream bed alteration, or water discharge permits required by the state DEQ or other state agencies. Copies of such permits shall be provided to the BLM's Authorized Officer when a Notice or Plan of Operations is filed. All operations, including casual use, shall be conducted in a manner that does not involve unnecessary or undue degradation of surface and subsurface water resources and that complies with all pertinent Federal and state water quality laws.

## **Claim Monuments**

State law prohibits use of plastic pipe for claim staking in Oregon. It is BLM policy that existing plastic pipe monuments have all openings (ends and slots) permanently closed. Upon loss or abandonment of the claim, all plastic pipe must be removed from the public lands. Old markers replaced during normal claim maintenance are to be replaced with either wood posts or stone and/or earth mounds, constructed in accordance with state law.

## **Drill Sites**

Wherever possible, exploratory drill sites should be located next to or on existing roads without blocking public access. When drill sites must be constructed, the size of the disturbance shall be as small as possible. Any operator engaging in mineral exploration that involves drilling to greater than 50 feet must obtain an exploration permit from the DOGAMI (ORS 517.962).

## **Dust and Erosion Control**

Any exposed ground surfaces susceptible to erosion will need to be protected during operation and also during periods of shut-down. This can be accomplished with seeding, mulching, installation of water diversions, and routine watering of dust-producing surfaces.

## **Fire Safety**

All state fire regulations must be followed, including obtaining a campfire permit or blasting permit, if needed. All internal gas combustion engines must be equipped with approved spark arresters and exhaust systems.

## **Safety and Public Access**

Under Public Law 167, the government has the right to dispose and manage surface resources (including timber) on mining claims located after July 23, 1955. These rights are limited to the extent that they do not endanger or materially interfere with any phase of an ongoing mining operation or uses reasonably incident thereto. Claims located prior to July 23, 1955 may have surface rights, if such claims were verified as being valid under Sections 5 and 6 of the Act.



The general public may not be excluded from the mining claim. Mining claimants shall not exclude the public from mining claims with force, intimidation, or posting of “no trespassing” signs. It is the operator’s responsibility to protect the public from mining hazards. The general public can be restricted only from specific dangerous areas (e.g., underground mines, open pits or equipment storage sites) by erecting fences, gates and warning signs. Gates or road blocks may be installed on existing or proposed roads only with BLM approval. Gates restricting public access onto a mine site will only be considered in such cases where the safety hazard is specifically created by the mining activity and the hazard covers a large area. The determination as to whether a safety hazard is large enough to warrant a gate will be determined on a case-by-case basis. Fences (rather than gates) or other approved barriers shall be utilized to protect the public from hazards related to small excavations, tunnels and shafts.

Some roads which cross private land to reach BLM-administered lands are controlled by the private parties. While some of these roads have been assigned BLM road numbers, access may only be granted for administrative use by the BLM and its licensees and permittees under a nonexclusive easement. Mining claimants are not considered licensees or permittees and must make their own arrangements with the private party to use such roads.

## Sewage

Self-contained or chemical toilets are to be used at exploration or mining operations and their contents disposed at approved dump stations. Outhouses and uncontained pit toilets are considered unnecessary and undue degradation and are not allowed on mining claims. County sanitation permits are required for all other types of sanitation facilities.

## Structures

A Notice or Plan of Operation is required when any structure is installed on a mining claim. A Notice or Plan of Operation is required when occupancy of more than 14 days occurs. The claimant must maintain the claim and operations, structures, equipment, and other facilities in a safe and orderly manner. It is district policy that permanent structures will not be allowed for exploration or prospecting operations. Permanent structures are those fixed to the ground by any of the various types of foundations, slabs, piers, poles, or other means allowed by state or county building codes. The term shall also include structures placed on the ground that lack foundations, slabs, piers or poles, and that can only be moved through disassembly into component parts or by techniques commonly used in house moving. Permanent structures include trailers, mobile homes, motor homes, vans, campers, cars, and similar structures when fixed to the ground by any method for more than 14 days. Any temporary structures placed on public lands in conjunction with prospecting or exploration are allowed only for the duration of such activities, unless expressly allowed in writing by the Authorized Officer to remain on the public lands. Temporary structures are defined as structures not fixed to the ground by a foundation and that can be moved without disassembly into their component parts.

Permanent structures may be allowed for mining operations if they are deemed reasonably incident to conducting the operation. Mining operations are defined as all functions, work, facilities, and activities in connection with development, mining, or processing mineral deposits.

All permanent or temporary structures placed on public lands shall conform to appropriate state or local building, fire, and electrical codes, and occupational safety and health and mine safety standards. BLM may require that operators remove any structures or facilities that have not been used for an extended period of time and reclaim the site.

## Equipment

The claimant must maintain the claim and operations, structures, equipment, and other facilities in a safe and orderly manner. Only equipment and supplies that are appropriate, reasonable, and in regular use for explorations and mining operations will be allowed on the claim. Equipment used only infrequently should be stored off-site. That which can be readily removed in a small truck and/or trailer at the end of a work day should not be left onsite. Storage of unused or infrequently used equipment will not normally serve to justify the



occupancy of a claim. Accumulation of unused and/or derelict equipment and other unused materials, including trash, may be in violation of federal and state ordinances regarding offensive littering, and will be considered undue and unnecessary degradation of the public lands. BLM may require the operator to remove equipment after an extended period of non-operation and to reclaim the site. In such cases, the claimant will be required to take immediate mitigative action.

## **Animals**

Pursuant to Public Law 167, use of a mining claim is expressly limited to prospecting, mining, or processing operations and uses reasonably incident thereto. Any maintenance of domestic animals on the claim must be reasonably incident to these expressed uses. Such animals must be managed in accordance with applicable federal, state and local ordinances such as not to cause undue or unnecessary degradation of the public lands. Unless otherwise permitted consistent with regulations at 43 CFR 4100 and controlled pursuant to 43 CFR 8360, agriculture animals are not considered necessary to conduct mining operations. If dogs or cats are to be present at the work site, the operator is required to keep them under control at all times so they do not chase wildlife or threaten people.

## **Tailings Ponds**

Settling ponds must be used to contain sediment, and any discharge must meet standards of the Oregon DEQ.

## **Solid and Hazardous Waste**

Trash, garbage, used oil, or other waste must be removed from public land and properly disposed. Trash, garbage or hazardous wastes must not be buried on public lands. Accumulations of trash, debris, or inoperable equipment on public lands are viewed as unnecessary degradation and will not be tolerated. Pursuant to 43 CFR 8365 and state regulations at part 164.785 and 164.805, operators conducting illegal disposals shall be held financially responsible for the clean-up of such disposals.

## **Occupancy at Mining Sites**

Occupying public land in excess of 14 days per calendar year must be reasonably incident to and required for actual continuous mining or diligent exploration operations and will require either a Notice or Plan of Operations. In general, operations at the casual use level are not sufficient to warrant occupancy on a mining claim.

The following discussion of occupancy only applies to those operators wishing to assert their right to live full-time on public lands pursuant to privileges granted under the mining laws. It does not apply to operators proposing to camp at prospecting or mining sites on weekends or one to two days during the week.

- Only those persons working diligently and continuously on a mining or exploration operation will be allowed to live on the claim beyond the 14-day per calendar year camping limit. A continuous mining or exploration operation is defined as an operation necessitating full-time work at the operating site. The Oregon State Bureau of Labor and Industries generally considers that full-time work consists of a minimum of 40 hours worked per week.
- Each person proposing to live full-time at the site would be expected to conduct full-time work each week. Normal working hours are to be specified on the Notice or Plan of Operation at the time of submittal to the district BLM office. Should work hours be altered periodically or seasonally, it is the responsibility of the operator to notify the BLM (prior to the change) so that the Notice or Plan can be modified. Camping sites used in conjunction with mineral exploration or extraction operations are expected to be kept in a neat and orderly condition. If operations cannot be pursued due to high fire danger in forested areas, then living at the claim site will not be permitted.



## **Security Guard**

In some cases, it may be reasonably incident for a security guard to live onsite to protect valuable property and equipment and/or safeguard the public from workings which are necessary for the mining operation. The need for a security guard shall be such that the person with those duties is required to be present at the site whenever the operation is shut down temporarily or at the end of the workday, or whenever the mining claimant, operator, or workers are not present on the site. The proposed occupancy by a security guard must be described as a Notice or Plan of Operations.

## **BLM Reclamation Requirements**

Reclamation of all disturbed areas must be performed concurrently or as soon as possible after exploration or mining ceases and shall conform to guidelines described in BLM Handbook H-3042-1. Reclamation shall include, but not be limited to:

- Saving topsoil for final application after reshaping disturbed areas.
- Taking measures to control erosion, landslides, and water runoff.
- Taking measures to isolate, remove, or control toxic materials.
- Reshaping the area disturbed, applying topsoil, and revegetating disturbed areas where reasonably practicable.
- Rehabilitating fisheries and wildlife habitat.

When reclamation of the disturbed area has been completed, except to the extent necessary to preserve evidence of mineralization, the BLM must be notified so that an inspection of the area can be made.

The following general guidelines will be used in developing site-specific stipulations for reclamation of exploration and mining activities.

## **Non-Operation**

All mining equipment, vehicles, and structures must be removed from the public lands during periods of non-operation in excess of 24 consecutive months and/or at the conclusion of mining, unless authorization from BLM is given to the operator or claimant in writing. Accumulations of debris and trash on mining claims are considered unnecessary and undue degradation and must be removed immediately regardless of the status of the operation. Failure to do so will result in the issuance of a notice of noncompliance.

## **Backfilling and Recontouring**

The first steps in reclaiming a disturbed site are backfilling excavations and reducing high walls, if feasible. Coarse rock material should be replaced first, followed by medium-sized material, with fine materials to be placed on top. Recontouring means shaping the disturbed area to blend with the surrounding lands, minimize the possibility of erosion, and facilitate revegetation.

## **Seedbed Preparation**

Recontouring should include preparation of an adequate seedbed. This is accomplished by ripping or discing compacted soils to a depth of at least 6 inches in rocky areas and at least 18 inches in less rocky areas. This should be done following the contour of the land to limit erosion. All stockpiled settling pond fines, and then topsoil, shall be spread evenly over the disturbed areas.



## Fertilizer

Due to the generally poor nutrient value of mined soils, it may be necessary to use fertilizer to ensure maximum yield from the seeding mixture. For example, a fertilizer with analysis of 16-16-16 (or other approved mix) should be spread at the rate of 200 lbs/acre, but not allowed to enter streams or bodies of water.

## Seeding

BLM-approved seeding prescription must be used to provide adequate revegetation for erosion control and restoration of wildlife habitat, and to achieve productive secondary uses of public lands. Seeding should be done in September or October to ensure that seed is in the ground prior to the first significant winter rains. If seeding fails, or is done at the wrong time, the operator may be asked to reseed the area at the appropriate time, as determined by the Authorized Officer.

Broadcast seeding is preferable on smaller sites. When using a whirlybird type seed spreader, it is important to keep the different seeds well mixed to achieve even distribution. For the best results, a drag harrow should be pulled over the seeded area to cover the seed before mulching. The Authorized Officer may recommend hydroseeding on critical sites for rapid coverage and erosion control on cut banks, fill slopes, and any other disturbed areas.

## Tree Replacement

Replacement of destroyed trees may be necessary with the planting of seedlings or container stock.

## Mulch

As directed by the BLM, during review of the Notice or Plan of Operations, the disturbed area may require mulching during interim or final reclamation procedures. Depending on site conditions, the mulch may need to be punched, netted, or blown on with a tackifier to hold it in place. In some cases, erosion control blankets may be cost effective for use.

## Roads

After mining is completed, all new roads shall be reclaimed, unless otherwise specified by the BLM. High walls and cut banks are to be knocked down or backfilled to blend with the surrounding landscape. Remove all culverts from drainage crossings and cut back the fill to the original channel. The roadbed should be ripped to a minimum depth of 18 inches to reduce compaction and provide a good seedbed. The road must then be fertilized, seeded, and mulched if necessary. When necessary, water bars are to be used to block access and provide drainage.

## Tailings Ponds

The ponds should be allowed to dry out, then the sediments removed and spread with the topsoil, unless the sediments contain toxic materials. If the ponds contain toxic materials, a plan will be developed to identify, dispose, and mitigate effects of the toxic materials. If necessary, a monitoring plan will also be implemented. The ponds should then be backfilled and reclaimed.

## Visual Resources

To the extent practicable, the reclaimed landscape should have characteristics that approximate or are compatible with the visual quality of the adjacent area.



## Suction Dredging

Specific requirements have been identified by the BLM and the state for suction dredging activities.

### State of Oregon Requirements for Suction Dredging

All suction dredge operations must be authorized by Permit # 0700-J issued by the Department of Environmental Quality. This permit is issued free of charge for dredges having hoses with an inside diameter of four inches or less. Registration and a filing fee of \$50.00 is required for suction dredges having hoses with an inside diameter greater than four inches. Mining operators should contact the Department of Environmental Quality, Water Quality Division, 811 S.W. Sixth Avenue, Portland, Oregon, 97204, (503) 229-5696, for further information.

Suction dredging outside the "permitted work period" established for certain waterways by the Oregon Department of Fish and Wildlife (ODFW) will require written permission by an ODFW biologist.

The river beds of navigable waterways are controlled by the Oregon Division of State Lands.

### BLM Requirements for Suction Dredging

Filing either a Notice or Plan of Operations is required on all suction dredge operations where the dredge has an intake hose equal to or greater than 4 inches in diameter regardless of nozzle size, or where any suction dredge operator proposes occupancy on BLM land (in excess of 14 calendar days per year) or the installation of structures of any kind.

Further, a Notice or Plan of Operation is required when more than one suction dredge is in operation at the same time on one mining claim regardless of intake hose size.

A Notice or Plan of Operation is not required for casual use activities, which include but are not limited to the following:

- Use of a suction dredge having an intake hose equal to or less than 4 inches in diameter and where no structures or occupancy beyond 14 calendar days per year is involved.
- Staking a mining claim.
- Prospecting, sampling, gold panning, or mining using only hand tools.

At the existing Sixes River Recreation Site—which is withdrawn from mining claim location—the use of hand tools (including shovels, gold pans, and sluice boxes) and suction dredges with a suction hose of four inches (state threshold for permit fee) or less is allowed with no permits or Notice or Plan of Operation required by the BLM Coos Bay District Office. Recreational miners are required to comply with DEQ requirements as described below. Larger suction dredges with intake hoses having a diameter greater than four inches are not allowed at this recreation site. Additional information on recreational mining at this site is available at the Coos Bay BLM office.

## Salable Minerals

### Proposed Operations

All proposed pits and quarries, and any exploration that involves surface disturbance, are required to have operating and reclamation plans approved by the Area Manager. All proposals will undergo the appropriate levels of review and compliance with the National Environmental Policy Act.



## Operating Procedures

The following requirements should be made a part of every contract or permit providing for the use of mineral material sites on the district:

- Oversized boulders shall not be wasted but shall be broken and utilized concurrently with the excavated material.
- The operator shall comply with local and state safety codes covering quarry operations, warning signs, and traffic control. All necessary permits must be obtained from state and county agencies.
- Use of the site for equipment storage and stockpiling rock material is allowed for the duration of the contract or permit. Use of the site beyond that time would be authorized under a special use permit.

## Quarry Design

Due to steep terrain in the operating area, most quarry developments will require a series of benches to effectively maximize the amount of mineral materials to be removed in a safe manner. In most cases, bench height should not exceed 40 feet, and if the bench will be used by bulldozers to access other parts of the quarry, the width of the bench should be at least 25 feet. If the bench is not used by equipment, then this width can be reduced to approximately 10 feet.

Clearing of timber and brush should be planned at least 10 feet beyond the edge of the excavation limit. Most often the brush will be piled and burned at the site or scattered nearby.

If at all possible, all topsoil and overburden should be stockpiled and saved for eventual quarry site reclamation. These piles may need to be stabilized by mulching or seeding to minimize erosion during the winter months.

As a standard procedure, the excavation of the quarry floor should be designed with an outslope of approximately two percent to provide for adequate drainage of the floor. Compliance with this design should be made a requirement of all operators at the site.







## Appendix H. Zone III - Lands

The following is a list of BLM-administered lands in the planning area identified through the planning process as being available for use in exchanges for private inholdings in Zones 1 or 2. These lands also may be available for disposal through sale under FLPMA Section 203(a) if no important recreation, wildlife, watershed, special status species habitat, and/or cultural values are identified during disposal clearance reviews, and no viable exchange proposals can be identified.

| <u>Township</u> | <u>Range</u> | <u>Section</u> | <u>Subdivision</u>                                                                               | <u>Status</u> | <u>Acres</u> <sup>1</sup> |
|-----------------|--------------|----------------|--------------------------------------------------------------------------------------------------|---------------|---------------------------|
| 19S             | 12W          | 01             | Lots 1, 2                                                                                        | PD            | 40.48                     |
| 21S             | 11W          | 31             | Lot 11                                                                                           | PD            | 40.00                     |
|                 |              | 32             | Lots 16, 23                                                                                      | PD            | 59.01                     |
| 22S             | 8W           | 15             | Lot 9, 10                                                                                        | O&C           | 25.30                     |
|                 |              | 21             | Lots 7, 14                                                                                       | O&C           | 2.42                      |
|                 |              | 24             | Lot 7                                                                                            | PD            | 3.00                      |
| 25S             | 11W          | 30             | Lot 5                                                                                            | PD            | 39.92                     |
| 25S             | 13W          | 06             | Por. Lot 4                                                                                       |               |                           |
|                 |              | 07             | Pors. of NE1/4, SE1/4NW1/4, SW1/4SW1/4, E1/2SW1/4, Lots 2, 3, 4 (utilized as an effluent lagoon) | PD            | 374.00                    |
|                 |              | 07             | Lots 5, 6, 7, 8 (zoned future industrial)                                                        | PD            | 109.73                    |
|                 |              | 18             | Lot 7, E1/2E1/2NW1/4 (zoned future industrial)                                                   | PD            | 56.15                     |
| 26S             | 08W          | 10             | SE1/4NE1/4                                                                                       | PD            | 40.00                     |
| 26S             | 11W          | 08             | NW1/4NE1/4                                                                                       | PD            | 40.00                     |
| 26S             | 12W          | 09             | Por. SE1/4SW1/4                                                                                  | Acq.          | 4.00                      |
| 26S             | 14W          | 28             | NW1/4NE1/4                                                                                       | PD            | 40.00                     |
| 27S             | 11W          | 05             | Por. S1/2NE1/4SE1/4NW1/4, SE1/4NW1/4SE1/4NW1/4                                                   | CBWR          | 1.32                      |
| 27S             | 12W          | 13             | Por. SE1/4NW1/4SE1/4                                                                             | CBWR          | 0.86                      |
| 27S             | 14W          | 29             | Lot 3                                                                                            | PD            | 2.28                      |
| 28S             | 12W          | 19             | SE1/4SE1/4                                                                                       | CBWR          | 40.00                     |
| 30S             | 12W          | 05             | Lot 6                                                                                            | O&C           | 1.80                      |
| 30S             | 12W          | 06             | Lots 3,4                                                                                         | PD            | 1.14                      |
| 30S             | 13W          | 21             | N1/2NE1/4NW1/4                                                                                   | PD            | 20.00                     |



## Appendix H

| <u>Township</u> | <u>Range</u> | <u>Section</u> | <u>Subdivision</u>                                                        | <u>Status</u> | <u>Acres</u> <sup>1</sup> |
|-----------------|--------------|----------------|---------------------------------------------------------------------------|---------------|---------------------------|
| 32S             | 15W          | 04             | NE1/4SE1/4NE1/4,<br>S1/2NE1/4NE1/4,<br>W1/2SE1/4NE1/4,<br>Lots 1, 2, 3, 4 | PD            | 71.75                     |
| 39S             | 12W          | 08             | W1/2NW1/4                                                                 | PD            | 80.00                     |

<sup>1</sup> Acreage based on MTP.

Note: Not all listed lands are shown on Map 2 due to the small size of some lands.



# Appendix I. Land Ownership Adjustment Criteria

In accordance with FLPMA and other laws, Executive Orders, and Departmental and Bureau policy, the evaluation process for any land disposal or acquisition will provide for consideration of unique resource values or other factors, including but not limited to those listed below:

- Access to public lands or access for public purposes.
- Threatened, Endangered, or sensitive plant and animal species habitat.
- Riparian areas, floodplains, and wetlands.
- Fish habitat.
- Nesting/breeding habitat for important game and non-game animals.
- Seasonal habitat of big game.
- Developed recreation sites and recreation use areas.
- Unique sites or habitats with fish, wildlife, botanical, cultural, or recreational interpretive values.
- High quality scenery.
- Energy and mineral potential.
- Land adjacent to rivers suitable for designation under the National Wild and Scenic Rivers Act.
- Significant cultural resources and sites eligible for inclusion on the National Register of Historic Places.
- Designated wilderness areas and areas being studied for possible wilderness designation.
- Accessibility of the land for recreation and other public uses.
- Amount of public investments in facilities or improvements and the potential for recovering those investments.
- Difficulty or cost of administration (manageability).
- To develop a more manageable land base for timber management (e.g., provide for logical harvest units, balance age class distributions).
- Significance of the decision in stabilizing business, social and economic conditions, and/or lifestyles.
- Whether private sites exist for the proposed use.
- Encumbrances, including but not limited to withdrawals and existing leases or permits.
- Consistency with cooperative agreements, and plans or policies of other agencies.
- Suitability (need for change in land ownership or use) for purposes including but not limited to community expansion or economic development, such as industrial, residential, or agricultural (other than grazing) development.







## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke

| Authority <sup>1</sup>            | T   | Location<br>R | Sec. | Acreage <sup>2</sup> | Purpose                              | Segregative<br>Effect <sup>3</sup> | Surface<br>Management<br>Agency | Recommend to Maintain or<br>Revoke and Rationale                      | Planned/Future<br>Management |
|-----------------------------------|-----|---------------|------|----------------------|--------------------------------------|------------------------------------|---------------------------------|-----------------------------------------------------------------------|------------------------------|
| PLO 3869<br>(OR 016183)           | 20S | 9W            | 31   | 81.29                | Smith River Falls<br>Recreation Site | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 20S | 9W            | 33   | 3.50                 | Vincent Creek<br>Recreation Site     | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 23S | 10W           | 2    | 78.86                | Loon Lake<br>Recreation Site         | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 27S | 10W           | 4    | 60.00                | Park Creek<br>Recreation Site        | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 27S | 10W           | 18   | 20.00                | Big Tree<br>Recreation Site          | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 30S | 9W            | 9    | 80.00                | Bear Creek<br>Recreation Site        | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 32S | 14W           | 12   | 120.00               | Sixes River<br>Recreation Site       | B                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
|                                   | 23S | 10W           | 1    | 51.51                | East Shore<br>Recreation Site        | C                                  | BLM                             | Maintain-Developed Site                                               | Recreation Site              |
| SO 12-31-1930<br>Rec. Wdl. No. 43 | 27S | 10W           | 17   | 590.00               | Cherry Creek<br>Natural Area         | B                                  | BLM                             | Maintain-Protecting site,<br>providing for research<br>opportunities. | Research Natural<br>Area     |
| PLO 3530<br>(OR 016183)           |     |               | 18   |                      |                                      |                                    |                                 |                                                                       |                              |
|                                   |     |               | 19   |                      |                                      |                                    |                                 |                                                                       |                              |
|                                   |     |               | 20   |                      |                                      |                                    |                                 |                                                                       |                              |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup>                   | Location |      | Acreage <sup>2</sup> | Purpose | Segregative Effect <sup>3</sup> | Surface Management Agency  | Recommend to Maintain or Revoke and Rationale | Planned/Future Management |                                                                                                        |                          |
|------------------------------------------|----------|------|----------------------|---------|---------------------------------|----------------------------|-----------------------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------|--------------------------|
| T                                        | R        | Sec. |                      |         |                                 |                            |                                               |                           |                                                                                                        |                          |
| Public Law 181<br>5-5-1926<br>(OR 21318) | 27S      | 11W  | 5                    | 120.00  |                                 | Laverne County Park        | B                                             | BLM/Coos County           | Maintain-Developed County Park.                                                                        |                          |
|                                          | 27S      | 12W  | 35                   | 160.00  |                                 | Rock Prairie County Park   | B                                             | BLM/Coos County           | Maintain-Potential for County Park development.                                                        |                          |
|                                          | 28S      | 9W   | 7                    | 87.72   |                                 | Judge Hamilton County Park | B                                             | BLM/Coos County           | Maintain-Potential for County Park development.                                                        |                          |
|                                          | 28S      | 11W  | 5                    | 80.00   |                                 | Middle Creek County Park   | B                                             | BLM/Coos County           | Maintain-Potential for County Park development.                                                        |                          |
|                                          | 28S      | 11W  | 11                   | 80.00   |                                 | Frona County Park          | B                                             | BLM/Coos County           | Maintain-Developed County Park.                                                                        |                          |
| SO 6-12-1907<br>(OR 21318)               | 40S      | 13W  | 11<br>14             | 320.75  |                                 | Potential National Park    | C                                             | BLM                       | Revoke-Not developed, no planned development, no public support for establishment of park or monument. | Manage for multiple use. |
| EO 11-24-1903<br>(OR 19231)              | 22S      | 13W  | 14                   | 85.00   |                                 | Umpqua Jetty maintenance   | B                                             | COE                       | Maintain-Serving original purpose.                                                                     |                          |
| EO 8-23-1895<br>(OR 21901)               | 22S      | 13W  | 13                   | 15.30   |                                 | Umpqua River Light Station | B                                             | USCG                      | Maintain-Serving original purpose.                                                                     |                          |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup>  | Location |     | Acreage <sup>2</sup> |       | Purpose                       | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                                                                                               | Planned/Future Management                                               |
|-------------------------|----------|-----|----------------------|-------|-------------------------------|---------------------------------|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| EO 7-14-1884 (OR19277)  | 26S      | 14W | 2                    | 41.41 | Military Facility             | B                               | US Navy                   | Maintain those acres functioning as a military facility. Revoke remaining acres that may be in excess of military needs. Indicated need for community economic development. | Recreational development or community economic development opportunity. |
| EO 6-14-1876 (OR 22094) | 26S      | 14W | 4                    | 14.20 | Arago Administrative Facility | B                               | USCG                      | Revoke-Indicated need for community economic development                                                                                                                    | Recreational development or community economic development opportunity. |
| EO 9-11-1843 (OR 36343) | 26S      | 14W | 4                    | 5.00  | Arago Lighthouse              | B                               | USCG                      | Revoke-USCG indicated a desire to relinquish operations of lighthouse                                                                                                       | Recreational development or community economic development opportunity. |
| EO 7-14-1884 (OR 4011)  | 26S      | 14W | 22                   | .43   | Bar Watch                     | B                               | USCG                      | Maintain-Serving original purpose.                                                                                                                                          |                                                                         |
| EO 7-14-1884 (OR 4011)  | 26S      | 14W | 23                   | .67   | Administrative site           | B                               | USCG                      | Maintain-Serving original purpose.                                                                                                                                          |                                                                         |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup>                | Location                            |        | Acreage <sup>2</sup> |             | Purpose                         | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                                                      | Planned/Future Management                                             |    |        |  |  |  |
|---------------------------------------|-------------------------------------|--------|----------------------|-------------|---------------------------------|---------------------------------|---------------------------|------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|----|--------|--|--|--|
| T                                     | R                                   | Sec.   |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
| EO 11-13-1889<br>(OR 19228)           | 25S                                 | 13W    | 18                   | 153.77      | Coos Bay Jetty Project          | B                               | COE                       | Revoke-Withdraw was established as a dredge spoil disposal area. Presently dredge spoils disposal is occurring in off-shore areas. | Recreational development as a portion of Coos Bay Shorelands SRMA.    |    |        |  |  |  |
|                                       | 25S                                 | 14W    | 13                   | 160.00      |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
| PLO 5490<br>(OR 012693)               | All Public Domain lands on District |        |                      | 50,329.0    | Multiple use management         | D                               | BLM                       | Maintain-Serving original purpose.                                                                                                 |                                                                       |    |        |  |  |  |
| PLO 6287,<br>EO 5-6-1935,<br>PLO 4395 | Unsurveyed Islands and rocks        |        |                      |             | Oregon National Wildlife Refuge | B                               | USF&WL                    | Maintain-Serving original purpose.                                                                                                 |                                                                       |    |        |  |  |  |
| PLO 6973<br>4-23-1993<br>(OR 46538)   | 25S                                 | 13W    | 4                    | 80.00       | North Spit Recreation Area.     | B                               | BLM                       | Maintain-Serving original purpose. Extend for a 20-year period.                                                                    | Recreational development as a portion of the Coos Bay Shoreland SRMA. |    |        |  |  |  |
|                                       |                                     |        | 5                    | 32.23       |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        | 6                    | 307.66      |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        | 7                    | 511.93      |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        | 8                    | 4.61        |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        | 18                   | 249.99      |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        | 25S                  | 14W         |                                 |                                 |                           |                                                                                                                                    |                                                                       | 12 | 14.85  |  |  |  |
|                                       |                                     |        |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       | 13 | 232.00 |  |  |  |
|                                       | 23                                  | 1.10   |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       | 24                                  | 398.89 |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       | 25                                  | 30.42  |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
| 26                                    | 113.21                              |        |                      |             |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        |                      | 1,976.89    |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |
|                                       |                                     |        |                      | (sub-total) |                                 |                                 |                           |                                                                                                                                    |                                                                       |    |        |  |  |  |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup>              | Location |     | Acreage <sup>2</sup> |                 | Purpose                                                              | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                                      | Planned/Future Management                        |
|-------------------------------------|----------|-----|----------------------|-----------------|----------------------------------------------------------------------|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
|                                     | T        | R   | Sec.                 |                 |                                                                      |                                 |                           |                                                                                                                    |                                                  |
| PLO 6967<br>4-29-1993<br>(OR 45401) | 30S      | 15W | 2                    | 94.20           | New River<br>ACEC                                                    | B                               | BLM                       | Maintain-Serving<br>original purpose.                                                                              | Protection of<br>unique resources.               |
|                                     |          |     | 3                    | 75.58           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 10                   | 209.00          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 11                   | 80.15           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 15                   | 156.83          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 21                   | 22.36           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 22                   | 109.83          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 28                   | 105.45          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 32                   | 2.18            |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 33                   | <u>27.40</u>    |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | 882.98          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | (sub-<br>total) |                                                                      |                                 |                           |                                                                                                                    |                                                  |
| PSC 01                              | 28S      | 10W | 6                    | 45.26           | Protect water<br>power and<br>reservoir<br>development<br>potential. | C                               | BLM/FERC                  | Revoke, unless there is<br>substantial evidence that<br>the site is viable for<br>the production of<br>hydropower. | Multiple use<br>management<br>of restored lands. |
|                                     |          |     | 8                    | 40.00           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 12                   | 40.00           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 14                   | <u>40.00</u>    |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | 165.26          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | (sub-<br>total) |                                                                      |                                 |                           |                                                                                                                    |                                                  |
| PSC 147                             | 27S      | 10W | 31                   | 115.35          | Protect water<br>power and<br>reservoir<br>development<br>potential. | C                               | BLM/FERC                  | Revoke, unless there is<br>substantial evidence that<br>the site is viable for<br>the production of<br>hydropower. | Multiple use<br>management<br>of restored lands. |
|                                     | 27S      | 11W | 35                   | 236.72          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     | 28S      | 10W | 5                    | 124.12          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 6                    | 45.14           |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     | 14                   | <u>240.00</u>   |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | 761.33          |                                                                      |                                 |                           |                                                                                                                    |                                                  |
|                                     |          |     |                      | (sub-<br>total) |                                                                      |                                 |                           |                                                                                                                    |                                                  |



| Authority <sup>1</sup> | Location |    | Sec. | Acreage <sup>2</sup> | Purpose                                                  | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                          | Planned/Future Management                  |
|------------------------|----------|----|------|----------------------|----------------------------------------------------------|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|
|                        | T        | R  |      |                      |                                                          |                                 |                           |                                                                                                        |                                            |
| PSC 162                | 22S      | 8W | 7    | 181.60               | Protect water power and reservoir development potential  | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands  |
|                        |          |    | 9    | 11.07                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 17   | 46.78                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 21   | 2.42                 |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 22S      | 9W | 7    | 56.44                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 9    | 50.04                |                                                          |                                 |                           |                                                                                                        |                                            |
| PSC 198                | 22S      | 8W | 13   | 80.00                | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |          |    |      | 428.35               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      | (sub-                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      | total)               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 22S      | 9W | 7    | 183.93               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      |                      |                                                          |                                 |                           |                                                                                                        |                                            |
| PSR 273                | 20S      | 9W | 26   | 85.27                | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |          |    | 28   | 44.31                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 32   | 75.85                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 34   | 39.79                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      | 245.22               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      | (sub-                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |      | total)               |                                                          |                                 |                           |                                                                                                        |                                            |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup> | Location |    | Acreage <sup>2</sup> | Purpose                                                  | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                          | Planned/Future Management                  |
|------------------------|----------|----|----------------------|----------------------------------------------------------|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|
| PSR 629,<br>WPD 11     | 20S      | 8W | 17                   | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |          |    | 39.65                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 623.68               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 304.23               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 120.00               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 20S      | 9W | 33                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 499.01               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 40.00                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 449.37               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 284.81               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 21S      | 8W | 31                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 232.49               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 278.38               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 173.27               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 400.00               |                                                          |                                 |                           |                                                                                                        |                                            |
| PSR 630                | 22S      | 8W | 11                   | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |          |    | 200.00               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 3,644.89             |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | (sub-                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | total)               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 22S      | 8W | 24                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    | 3.00                 |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |                      |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |                      |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |    |                      |                                                          |                                 |                           |                                                                                                        |                                            |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup> | Location |     | Acreage <sup>2</sup> | Purpose                                                  | Segregative Effect <sup>3</sup> | Surface Management Agency | Recommend to Maintain or Revoke and Rationale                                                          | Planned/Future Management                  |
|------------------------|----------|-----|----------------------|----------------------------------------------------------|---------------------------------|---------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|
| PSR 633,<br>WPD 11     | 22S      | 7W  | 19                   | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        | 22S      | 8W  | 5                    |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 22S      | 9W  | 7                    |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 13                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 17                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 23S      | 7W  | 7                    |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 19                   |                                                          |                                 |                           |                                                                                                        |                                            |
| PSR 634,<br>WPD 11     |          |     | 151.06               | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |          |     | 30.15                |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | <u>29.38</u>         |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 23S      | 8W  | 11                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 551.89               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | (sub-total)          |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 239.95               |                                                          |                                 |                           |                                                                                                        |                                            |
| PSR 645,<br>WPD 12     | 22S      | 10W | 35                   | Protect water power and reservoir development potential. | C                               | BLM/FERC                  | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        | 23S      | 9W  | 7                    |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 17                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 19                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        | 23S      | 10W | 1                    |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 13                   |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | <u>40.00</u>         |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 771.67               |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | (sub-total)          |                                                          |                                 |                           |                                                                                                        |                                            |
|                        |          |     | 40.00                |                                                          |                                 |                           |                                                                                                        |                                            |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup> | T   | Location<br>R Sec. | Acreage <sup>2</sup> | Purpose                                                  | Segregative<br>Effect <sup>3</sup> | Surface<br>Management<br>Agency | Recommend to Maintain or<br>Revoke and Rationale                                                       | Planned/Future<br>Management               |
|------------------------|-----|--------------------|----------------------|----------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|
| PSR 659                | 30S | 9W 9               | 40.00                | Protect water power and reservoir development potential. | C                                  | BLM/FERC                        | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
| PSR 659,<br>WPD 14     | 26S | 9W 17              | 160.00               | Protect water power and reservoir development potential. | C                                  | BLM/FERC                        | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |     | 27S 9W 7           | 265.55               |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     | 27S 11W 15         | 182.80               |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        | 30S | 9W 17              | 80.00                |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        | 30S | 10W 3              | 120.00               |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     | 13                 | <u>160.00</u>        |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | 1,648.35             |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | sub-                 |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | total)               |                                                          |                                    |                                 |                                                                                                        |                                            |
| PSR 662                | 26S | 9W 10              | 360.00               | Protect water power and reservoir development potential. | C                                  | BLM/FERC                        | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |
|                        |     | 14                 | 160.00               |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        | 32S | 13W 17             | 400.00               |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        | 32S | 14W 11             | 40.00                |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     | 12                 | <u>160.00</u>        |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | 1,120.00             |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | (sub-                |                                                          |                                    |                                 |                                                                                                        |                                            |
|                        |     |                    | total)               |                                                          |                                    |                                 |                                                                                                        |                                            |
| WPD 14                 | 30S | 9W 9               | 40.00                | Protect water power and reservoir development potential. | C                                  | BLM/FERC                        | Revoke, unless there is substantial evidence that the site is viable for the production of hydropower. | Multiple use management of restored lands. |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Authority <sup>1</sup> | T   | Location<br>R | Sec. | Acreage <sup>2</sup> | Purpose                                                              | Segregative<br>Effect <sup>3</sup> | Surface<br>Management<br>Agency | Recommend to Maintain or<br>Revoke and Rationale                                                                   | Planned/Future<br>Management                     |
|------------------------|-----|---------------|------|----------------------|----------------------------------------------------------------------|------------------------------------|---------------------------------|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| WPD 17                 | 27S | 11W           | 5    | 610.66               | Protect water<br>power and<br>reservoir<br>development<br>potential. | C                                  | BLM/FERC                        | Revoke, unless there is<br>substantial evidence that<br>the site is viable for<br>the production of<br>hydropower. | Multiple use<br>management<br>of restored lands. |
|                        |     |               | 7    | 40.00                |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 17   | 40.00                |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 19   | 163.04               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 21   | 440.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 29   | 480.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 31   | 280.14               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 33   | 240.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        | 27S | 12W           | 11   | 186.14               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 13   | 520.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 23   | 200.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 25   | 320.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 27   | 240.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 35   | 220.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        | 28S | 9W            | 7    | 335.20               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        | 28S | 10W           | 3    | 366.60               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 5    | 329.68               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 9    | 280.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 11   | 240.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 15   | 80.00                |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        | 28S | 11W           | 1    | 152.80               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 3    | 234.00               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 7    | 32.28                |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        | 28S | 12W           | 1    | 254.80               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 13   | 155.68               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               | 23   | 161.76               |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               |      | 6,602.78             |                                                                      |                                    |                                 |                                                                                                                    |                                                  |
|                        |     |               |      | (sub-<br>total)      |                                                                      |                                    |                                 |                                                                                                                    |                                                  |



## Appendix J. Land Withdrawals and Recommendations to Maintain or Revoke (continued)

| Acreage Summary            | Acreage <sup>2</sup> | Effect <sup>3</sup> |
|----------------------------|----------------------|---------------------|
| BLM Administrative Sites   | 4,265.78             | B                   |
| County Administrative Site | 527.72               | B                   |
| Public Domain-Multiple Use | 50,329.00            | D                   |
| Other Agency               | 480.78               | A or B              |
| Water - Power Sites        | 16,166.67            | C                   |

### <sup>1</sup> Authority Abbreviations:

EO - Executive Order      PSR - Power Site Reserve  
 PLO - Public Land Order      SO - Secretarial Order  
 PSC - Power Site Classification      WPD - Water Power Designation

<sup>2</sup> Table does not include lands that have been transferred out of federal ownership subsequent to withdrawal. Acreage based on the Master Title Plat.

### <sup>3</sup> Segregative Effect:

A - Withdrawn from operation of the general land laws, the mining laws and the mineral leasing laws.  
 B - Withdrawn from operation of the general land laws and the mining laws.  
 C - Withdrawn from operation of the general land laws only.  
 D - Withdrawn from operation of the general land laws, but not from the Recreation and Public Purposes Act, sales or exchanges.

### Abbreviations Used:

COE = Corp of Engineers  
 USCG = US Coast Guard  
 USF&W = US Fish and Wildlife Service  
 FERC = Federal Energy and Regulation Commission  
 (OR XXX) = Oregon Case File Number

February 1994







# Appendix K. Land Use Classifications and Withdrawals

**Table K-1. Existing Land Use Classifications**

| Type of Classification | Location                                                                      | Acreage <sup>1</sup> | Purpose                                         | Segregative Effect                                                                |
|------------------------|-------------------------------------------------------------------------------|----------------------|-------------------------------------------------|-----------------------------------------------------------------------------------|
| R&PP<br>(OR 38907)     | T.28S., R.11W.<br>Section 5 Lots<br>9-12, 14                                  | 18.27                | Coos County<br>Rehabilitation<br>Farm           | Withdrawn from<br>appropriation<br>under general land laws<br>and mining laws.    |
| R&PP<br>(OR 016152)    | T.27S., R.11W.,<br>Section 5 Portions<br>S1/2NW1/4, N1/2SW1/4,<br>Lot 1, SENE | 129.4                | County Park<br>Laverne                          | Withdrawn from<br>appropriation<br>under general<br>land laws and mining<br>laws. |
| R&PP<br>(OR 7761)      | T.31S., R.12W<br>Section 13 Portion<br>Lot 18                                 | 0.66                 | School play-<br>ground, Powers                  | Withdrawn from<br>appropriation<br>under general land laws<br>and mining laws.    |
| R&PP<br>(OR 46140)     | T.26S., R.14W.<br>Section 3 Portion<br>SE1/4NE1/4                             | 0.37                 | Charleston RFPD<br>Fire Hall<br>Community Bldg. | Withdrawn from<br>appropriation<br>under general land laws<br>and mining laws.    |

<sup>1</sup> Acreage derived from Master Title Plat



**Table K-2. Proposed Dean Creek Withdrawal****Federal Lands**

T.21S., R.11W.,

Section 31, Portion Lot 4

Section 32, Portion Lots 5, 6, 7, 8

Section 33, Portion Lot 7, Lot 8, Portion S1/2SW1/4,

Portion SW1/4SE1/4, SE1/4SE1/4

Section 34, Lots 5 and 6

T.22S., R.11W.,

Section 3, Portion Lot 14, Lot 15

Section 4, Portion SE1/4NE1/4, W1/2NE1/4, NE1/4NE1/4, NW1/4

Section 5, Lots 1, 2, Portion NW1/4, W1/2NE1/4

Section 6, Lots 1, 2, 3, Portion NE1/4

The areas described aggregate approximately 1,041 acres in Douglas County, Oregon.<sup>1</sup>

**Private Lands**

T.21S., R.11W.,

Section 32, Portion Lot 8

Section 33, Lots 5 and 6, Portion Lot 7, Portion S1/2SW1/4,

Portion SW1/4SE1/4

The area described aggregates approximately 56 acres in Douglas County, Oregon.<sup>1</sup>

The Dean Creek Elk Viewing Area Habitat Management Plan (HMP), approved on December 19, 1986, does not address the need for a protective withdrawal. Since formulation of the HMP, BLM has invested thousands of dollars in developing the Dean Creek Elk Viewing Area (1041 acres) and will continue to develop the site further as well as acquire additional lands to expand the area. These investments, combined with the management prescriptions for the Dean Creek Elk Viewing Area, necessitate the need for a protective withdrawal to preclude other potential uses which would destroy the integrity of the elk viewing area. Withdrawal of the lands from the operation of the mining laws and public land laws is the only way to eliminate all other nonconforming uses of the lands within the Dean Creek Elk Viewing Area.

<sup>1</sup> Acreage derived from the Master Title Plat.



**Table K-3. Proposed Withdrawal Relinquishment****U.S. Corps of Engineers, Coos Bay Jetty Project**

T.25 S., R.13 W.,  
Section 18, W1/2NW1/4, NW1/4SW1/4, Lot 8

T.25 S., R.14 W.,  
Section 13, E1/2SE1/4, Lots 1 and 2

The area described contains 313.84 acres.<sup>1</sup>

The withdrawal established by EO 11/13/1889, OR 19228 held by the U.S. Army, Corps of Engineers, (Coos Bay Jetty Project) was partially revoked in 1984. With the development of the Coos Bay Shorelands Special Recreation Management Area, BLM recognized a need for administrative jurisdiction over all federal lands on the Coos Bay North Spit to facilitate the area's management. The Corps of Engineers has agreed to consider relinquishment of the remaining 313.84 acres of the withdrawal and incorporation of the lands into the existing right-of-way reservation OR #36509.

<sup>1</sup> Acreage is derived from the Master Title Plat.



**Table K-4. Proposed Administrative Withdrawals**

| Site Name                                        | Legal Description                |                                                 | Acres <sup>1</sup> |
|--------------------------------------------------|----------------------------------|-------------------------------------------------|--------------------|
| Wassen Creek ACEC                                | T.21S., R.9W.                    | Portions of Sections 7, 8, 17, and 18;          | 3,440              |
|                                                  | T.21S., R.10W.                   | Portions of Sections 12 and 13                  |                    |
| North Fork Coquille River ACEC                   | T.26S., R.10W.                   | Portions of Sections 9, 16, and 21              | 290                |
| China Wall ACEC                                  | T.27 S., R.10W.                  | Portion of Section 29                           | 240                |
| Tioga Creek ACEC                                 | T.27S., R.9W.                    | Portion of Section 17                           | 40                 |
| Upper Rock Creek ACEC                            | T.29S., R.9W.                    | Portion of Section 5                            | 460                |
| North Fork Hunter Creek ACEC                     | T.37S., R.14W.                   | Portions of Sections 1, 2, 11, 12, 13, and 14   | 1,730              |
| Hunter Creek Bog ACEC                            | T.37S., R.14W.                   | Portions of Sections 13 and 24                  | 570                |
| North Fork Chetco River ACEC                     | T.40S., R.13W.                   | Portions of Sections 4, 5, 8, and 9             | 600                |
| Burnt Mountain Cabin Recreation Site             | T.27S., R.10W.                   | Portion of Section 13                           | 38                 |
| Palmer Butte Recreation Site                     | T.40S., R.13W.                   | Portion of Section 13                           | 40                 |
| Big Bend Recreation Site (Potential)             | T.21S., R.8W.                    | Portion of Section 10                           | 200                |
| Smith River Log Dump Recreation Site (Potential) | T.20S., R.10W.<br>T.20S., R.11W. | Portion of Section 36,<br>Portion of Section 31 | 5                  |
| Fawn Creek Boat Ramp (Potential)                 | T.20S., R.9W.                    | Portion of Section 31                           | 5                  |
| McKinley Camp Recreation Site (Potential)        | T.27S., R.11W.                   | Portion of Section 21                           | 10                 |
| Tioga Basin Recreation Site (Potential)          | T.26S., R.9W.                    | Portion of Section 35                           | 30                 |
| East Fairview Boat Ramp (Potential)              | T.27S., R.12W.                   | Portion of Section 13                           | 6                  |



**Table K-4. Proposed Administrative Withdrawals (continued)**

| Site Name                                                                                                                                                                                                                                                                                                              | Legal Description                                 | Acres <sup>1</sup> |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|--------------------|
| The above list includes existing and potential recreation sites or areas and proposed special management areas. Withdrawal of these lands from the mining and public land laws would eliminate all other nonconforming uses and protect the values that resulted in selection of the site/area for special management. |                                                   |                    |
| Site Name                                                                                                                                                                                                                                                                                                              | Legal Description                                 | Acres <sup>1</sup> |
| Wassen Seed Orchard                                                                                                                                                                                                                                                                                                    | T.21 S., R.9 W. Sec. 10 SE1/4NW1/4                | 26                 |
| Johns Peak Test Site                                                                                                                                                                                                                                                                                                   | T.23 S., R.9 W. Sec. 27 NE1/4SW1/4                | 24                 |
| Burnt Ridge                                                                                                                                                                                                                                                                                                            | T.26 S., R.9 W. Sec. 33 N1/2NW1/4                 | 12                 |
| Elk Run                                                                                                                                                                                                                                                                                                                | T.26 S., R.10 W. Sec. 8 SE1/4SW1/4                | 5                  |
| Elk Run                                                                                                                                                                                                                                                                                                                | T.26 S., R.10 W. Sec. 17 NE1/4NW1/4               | 9                  |
| Big Basin                                                                                                                                                                                                                                                                                                              | T.26 S., R.12 W. Sec. 15 SE1/4SE1/4               | 1                  |
| Lookout Ridge                                                                                                                                                                                                                                                                                                          | T.26 S., R.12 W. Sec. 35 SE1/4NE1/4, N1/2SE1/4    | 15                 |
| Middle Fork Brummit Creek                                                                                                                                                                                                                                                                                              | T.27 S., R.9 W. Sec. 19 SE1/4SE1/4                | 2                  |
| Joe Colombo                                                                                                                                                                                                                                                                                                            | T.27 S., R.9 W. Sec. 29 SE1/4NE1/4, NE1/4SE1/4 10 |                    |
| Middle Fork Brummit Creek                                                                                                                                                                                                                                                                                              | T.27 S., R.9 W. Sec. 30 NE1/4NE1/4                | 2                  |
| Brewster Rock                                                                                                                                                                                                                                                                                                          | T.27 S., R.10 W. Sec. 29 SE1/4NE1/4               | 9                  |
| China Wall                                                                                                                                                                                                                                                                                                             | T.27 S., R.10 W. Sec. 31 NE1/4SE1/4               | 2                  |
| China Wall                                                                                                                                                                                                                                                                                                             | T.27 S., R.10 W. Sec. 32 NW1/4NW1/4               | 4                  |
| Cultus                                                                                                                                                                                                                                                                                                                 | T.27 S., R.11 W. Sec. 22 SW1/2SW1/4               | 10                 |
| Cherry Creek                                                                                                                                                                                                                                                                                                           | T.27 S., R.11 W. Sec. 23 S1/2NW1/4                | 8                  |
| Cultus                                                                                                                                                                                                                                                                                                                 | T.27 S., R.11 W. Sec. 27 NW1/4NW1/4               | 4                  |
| Camas Creek                                                                                                                                                                                                                                                                                                            | T.28 S., R.11 W. Sec. 36 NW1/4NE1/4               | 13                 |
| Elk Creek                                                                                                                                                                                                                                                                                                              | T.28 S., R.11 W. Sec. 36 N1/2N1/2                 | 13                 |
| Weekly Creek                                                                                                                                                                                                                                                                                                           | T.28 S., R.12 W. Sec. 36 E1/2SE1/4                | 11                 |
| Sandy Single                                                                                                                                                                                                                                                                                                           | T.29 S., R.10 W. Sec. 2 S1/2SE1/4                 | 11                 |
| Slater Creek                                                                                                                                                                                                                                                                                                           | T.30 S., R.9 W. Sec. 17 SW1/4NW1/4                | 11                 |
| Russell - Eckley                                                                                                                                                                                                                                                                                                       | T.30 S., R.12 W. Sec. 29 S1/2SE1/4                | 3                  |
| White Mountain                                                                                                                                                                                                                                                                                                         | T.31 S., R.14 W. Sec. 17 NW1/4NW1/4               | 12                 |
| Lobster Hill                                                                                                                                                                                                                                                                                                           | T.35 S., R.13 W. Sec. 20 center of section        | 13                 |
| Northern Prairie                                                                                                                                                                                                                                                                                                       | T.39 S., R.13 W. Sec. 13 NE1/4NE1/4               | 11                 |
| Black Mound                                                                                                                                                                                                                                                                                                            | T.40 S., R.13 W. Sec. 20 NE1/4NW1/4               | 13                 |
| Shot Gun Quarry                                                                                                                                                                                                                                                                                                        | T.26 S., R.9 W. Sec. 17 SW1/4SE1/4                | 2                  |
| Tioga Creek Quarry                                                                                                                                                                                                                                                                                                     | T.26 S., R.9 W. Sec. 31 NW1/4SE1/4                | 3                  |
| Moon Creek Quarry                                                                                                                                                                                                                                                                                                      | T.26 S., R.11 W. Sec. 35 SW1/4NW1/4               | 4                  |
| Buck Peak Quarry                                                                                                                                                                                                                                                                                                       | T.27 S., R.9 W. Sec. 10 NW1/4NW1/4                | 2                  |
| Elk Wallow Quarry                                                                                                                                                                                                                                                                                                      | T.27 S., R.9 W. Sec. 14 SE1/4SE1/4                | 21                 |
| Burnt Mountain Quarry                                                                                                                                                                                                                                                                                                  | T.27 S., R.9 W. Sec. 24 SW1/4SE1/4                | 5                  |
| Laverne Stockpile                                                                                                                                                                                                                                                                                                      | T.27 S., R.11 W. Sec. 5 NW1/4SE1/4                | 2                  |
| Sandy Quarry                                                                                                                                                                                                                                                                                                           | T.28 S., R.10 W. Sec. 27 SE1/4SE1/4               | 11                 |

The sites listed above include progeny test sites, seed production areas, or rock quarries that are proposed for administrative withdrawal. The BLM has invested thousands of dollars in development and maintenance of the sites, necessitating the need for protective withdrawals to preclude other potential uses. Withdrawal of the lands from the operation of the mining and public land laws would eliminate all other nonconforming uses.

<sup>1</sup> Acreages are derived from GIS.



**Table K-5. Proposed Cape Blanco Lighthouse Withdrawal****Federal Lands**

T.32S., R.16W., Section 2, Lot 1

The area described contains 47.30 acres.<sup>1</sup>

The BLM has been negotiating with the U.S. Coast Guard to acquire the above described lands which house the Cape Blanco Lighthouse facilities. If the acquisition is approved, the site could be used as a center for public benefit for the interpretation and preservation of maritime history and aboriginal prehistory. The site contains existing archaeological resources as well as the lighthouse. Upon acquisition it is likely that additional improvements would be added to the site. These features should be protected from potential loss, which could occur from the non-discretionary land and mining laws, by placing a withdrawal on the site.

<sup>1</sup> Acreage is derived from the Master Title Plat.**Table K-6. Proposed Pacific Ocean Coastline Withdrawal**

| Name                          |                | Legal Description                                                         | Acres <sup>1</sup> |
|-------------------------------|----------------|---------------------------------------------------------------------------|--------------------|
| Pacific<br>Ocean<br>Coastline | T.19S., R.12W. | Section 1 Lots 1-2                                                        | 40.48              |
|                               | T.26S., R.14W. | Section 28 NW1/4NE1/4                                                     | 40.00              |
|                               | T.27S., R.14W. | Section 29 Lot 3                                                          | 2.28               |
|                               | T.30S., R.15W. | Section 12 SW1/4SW1/4                                                     | 40.00              |
|                               | T.32S., R.15W. | Section 4 Lots 1-4,<br>S1/2NE1/4NE1/4, N1/2SE1/4NE1/4,<br>SW1/4SE1/4NE1/4 | 71.75              |
|                               | T.33S., R.14W. | Section 31 Lot 2, 6-7,<br>NE1/4SE1/4                                      | 151.56             |
|                               | T.34S., R.15W. | Section 1 Lot 1                                                           | 7.92               |
|                               | T.34S., R.14W. | Section 6 Lot 1                                                           | 40.70              |
|                               |                | Section 33 Lots 1-3, 7                                                    | 162.05             |
|                               |                | Section 34 NW1/4NW1/4                                                     | 40.00              |
|                               | T.37S., R.14W. | Section 7 NE1/4NW1/4                                                      | 40.00              |
|                               | T.38S., R.14W. | Section 4 SE1/4SW1/4                                                      | 40.00              |
|                               |                | Section 5 SW1/4NE1/4                                                      | 40.00              |
|                               |                | Section 34 SE1/4NW1/4                                                     | 40.00              |
|                               | T.39S., R.14W. | Section 23 NW1/4NW1/4                                                     | 40.00              |
|                               | T.41S., R.13W. | Section 6 Lot 9                                                           | 1.44               |
|                               |                | Section 7 lot 2                                                           | 1.44               |

The proposed Pacific Ocean Coastline Withdrawal covers approximately 800 acres located within six miles of the Pacific Shoreline. In addition to recreational, botanical, and visual resources values, these parcels contain numerous existing and potential archaeological and historical values which warrant protection from the nondiscretionary mining laws.

<sup>1</sup> Acreage is derived from the Master Title Plat.



# Appendix L. Monitoring Plan

## Introduction

The monitoring plan for the RMP is tiered to the Monitoring and Evaluation Plan for the SEIS Record of Decision. Since the SEIS Monitoring and Evaluation Plan is not yet fully refined, the RMP Monitoring Plan is not complete. BLM has been, and will continue to be, a full participant in the development of the SEIS Monitoring and Evaluation Plan. Ongoing BLM effectiveness and validation monitoring will continue where relevant to RMP direction (e.g., stocking surveys, threatened and endangered species studies, and water quality measurements).

The SEIS and RMP monitoring plans will not identify all the monitoring the Coos Bay District will do. Activity and project plans may identify monitoring needs of their own.

## All Land Use Allocations

### Expected Future Conditions and Outputs

- Protection of SEIS special attention species so as not to elevate their status to any higher level of concern.

## Implementation Monitoring

### Questions

1. Are surveys for the species listed in Appendix C conducted before ground-disturbing activities occur?
2. Are protection buffers being provided for specific rare and locally endemic species and other species in habitats identified in the SEIS ROD?
3. Are the sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix C being protected?
4. Are the sites of amphibians, mammals, bryophytes, mollusks, vascular plants, fungi, lichens, and arthropod species listed in Appendix C being surveyed as directed in the SEIS ROD?
5. Are high priority sites for species management being identified?
6. Are general regional surveys being conducted to acquire additional information and to determine necessary levels of protection for arthropods and fungi species that were not classed as rare and endemic, bryophytes, and lichens?

### Monitoring Requirements

1. At least 20 percent of all management actions will be examined prior to project initiation and re-examined following project completion, to determine if: surveys are conducted for species listed in Appendix C, protection buffers are provided for specific rare and locally endemic species and other species in habitats identified in the SEIS ROD, and sites of species listed in Appendix C are protected.
2. The Annual Program Summary will address Implementation Questions 4-6.



## Effectiveness and Validation Monitoring

### Questions

1. Are measures taken to protect the SEIS special attention species effective?
2. Is the forest ecosystem functioning as a productive and sustainable ecological unit?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.

Table K-4. Proposed Forest Owner's Monitoring Implementation

| Question                                                                                                                                                                  | Monitoring Requirements                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Are the surveys for the species listed in Appendix C conducted before ground disturbing activities occur?                                                              | Yes. Surveys for the species listed in Appendix C are conducted before ground disturbing activities occur.                                                                 |
| 2. Are protection buffers being provided for species listed in Appendix C and other species listed in the SEIS RCR?                                                       | Yes. Protection buffers are provided for species listed in Appendix C and other species listed in the SEIS RCR.                                                            |
| 3. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being protected?                              | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being protected.                             |
| 4. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being monitored as directed in the SEIS RCR?  | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being monitored as directed in the SEIS RCR. |
| 5. Are high priority sites for species listed in Appendix C being monitored?                                                                                              | Yes. High priority sites for species listed in Appendix C are being monitored.                                                                                             |
| 6. Are general riparian surveys conducted in riparian habitat listed in Appendix C and other habitat listed in the SEIS RCR?                                              | Yes. General riparian surveys are conducted in riparian habitat listed in Appendix C and other habitat listed in the SEIS RCR.                                             |
| 7. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being monitored as directed in the SEIS RCR?  | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being monitored as directed in the SEIS RCR. |
| 8. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being monitored as directed in the SEIS RCR?  | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being monitored as directed in the SEIS RCR. |
| 9. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being monitored as directed in the SEIS RCR?  | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being monitored as directed in the SEIS RCR. |
| 10. Are the sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C being monitored as directed in the SEIS RCR? | Yes. The sites of amphibious, streamside, riparian, wetland, vernal pools, forest, and other habitat listed in Appendix C are being monitored as directed in the SEIS RCR. |



# Riparian Reserves

## Expected Future Conditions and Outputs

- See Aquatic Conservation Strategy objectives.
- Provision of habitat for special status and SEIS special attention species.

## Implementation Monitoring

### Questions

1. Are watershed analyses being completed before on-the-ground actions are initiated in Riparian Reserves?
2. Is the width and integrity of the Riparian Reserves being maintained? (For example, did the conditions that existed before management activities change in ways that are not in accordance with the SEIS ROD Standards and Guidelines and RMP management direction?)
3. What silvicultural practices are being applied to control stocking, re-establish and manage stands, and acquire desired vegetation characteristics needed to attain Aquatic Conservation Strategy objectives?
4. Are management activities in Riparian Reserves consistent with SEIS ROD Standards and Guidelines, RMP management direction, and Aquatic Conservation Strategy objectives?
5. Are new structures and improvements in Riparian Reserves constructed to minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations, and accommodate the 100-year flood?
6.
  - A) Are all mining structures, support facilities, and roads located outside the Riparian Reserves?
  - B) Are those located within the Riparian Reserves meeting the objectives of the Aquatic Conservation Strategy?
  - C) Are all solid and sanitary waste facilities excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with SEIS ROD Standards and Guidelines and RMP management direction?
7. Are new recreation facilities within the Riparian Reserves designed to meet, and where practicable, contribute to Aquatic Conservation Strategy objectives? Are mitigation measures initiated where existing recreation facilities are not meeting Aquatic Conservation Strategy objectives?

### Monitoring Requirements

1. The files on each year's on-the-ground actions will be checked annually to ensure that watershed analyses were completed prior to project initiation and to ensure the concerns identified in the watershed analysis were addressed in the project's environmental assessment.
2. At least 20 percent of management activities within each resource area will be examined before project initiation and re-examined following project completion to determine whether the width and integrity of the Riparian Reserves were maintained.
3. The Annual Program Summary will report what silvicultural practices are being applied to attain Aquatic Conservation Strategy objectives.
4. At least 20 percent of the activities that are conducted or authorized within Riparian Reserves will be reviewed to identify whether the actions were consistent with the SEIS ROD Standards and Guidelines, RMP



management direction, and Aquatic Conservation Strategy objectives. In addition to reporting the results of this monitoring, the Annual Program Summary will also summarize the types of activities that were conducted or authorized within Riparian Reserves.

5. All new structures and improvements within a Riparian Reserve will be monitored during and after construction to ensure that it was constructed to: minimize the diversion of natural hydrologic flow paths, reduce the amount of sediment delivery into the stream, protect fish and wildlife populations, and accommodate the 100-year flood.
6. All approved mining Plans of Operations will be reviewed to determine if:
  - A) Both a reclamation plan and bond were required.
  - B) Structures, support facilities and roads were located outside of Riparian Reserves, or in compliance with Aquatic Conservation Strategy objectives if located inside the Riparian Reserve; and
  - C) If solid and sanitary waste facilities were excluded from Riparian Reserves or located, monitored, and reclaimed in accordance with RMP management direction.
7. The Annual Program Summary will examine the status of evaluations of existing recreational facilities inside Riparian Reserves to ensure that Aquatic Conservation Strategy objectives are met. The Summary will also report on the status of the mitigation measures initiated where the Aquatic Conservation Strategy objectives cannot be met.

## Effectiveness and Validation Monitoring

### Questions

1. Is the health of Riparian Reserves improving?
2. Are management actions designed to rehabilitate Riparian Reserves effective?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Late-Successional Reserves

## Expected Future Conditions and Outputs

- Development and maintenance of a functional, interacting, late-successional and old-growth forest ecosystem in Late-Successional Reserves.
- Protection and enhancement of habitat for late-successional and old-growth forest-related species including the northern spotted owl and marbled murrelet.

## Implementation Monitoring

### Questions

1. What is the status of the preparation of assessments and fire plans for Late-Successional Reserves?
2. What activities were conducted or authorized within Late-Successional Reserves and how were they compatible with the objectives of the Late-Successional Reserve Assessment? Were the activities consistent with SEIS ROD Standards and Guidelines, RMP management direction, and Regional Ecosystem Office review requirements and the Late-Successional Reserve assessment?
3. What is the status of development and implementation of plans to eliminate or control non-native species which adversely impact late-successional objectives?

### Monitoring Requirements

1. The Annual Program Summary will address Implementation Questions 1-3.

## Effectiveness and Validation Monitoring

### Questions

1. Are forest management activities (e.g., special forest product harvesting) within Late-Successional Reserves compatible with the goal of developing and maintaining a functional, interacting, late-successional and old-growth forest ecosystem?
2. Does the harvest of special forest products have adverse effects on Late-Successional Reserve objectives?
3. Is a functional, interacting, late-successional ecosystem maintained where adequate, and restored where inadequate?
4. Did silvicultural treatments benefit the creation and maintenance of late-successional conditions?
5. What is the relationship between levels of management intervention and the health and maintenance of late-successional and old-growth ecosystems?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Matrix

## Expected Future Conditions and Outputs

- Production of a stable supply of timber and other forest commodities.
- Maintenance of important ecological functions such as dispersal of organisms, carryover of some species from one stand to the next, and maintenance of ecologically valuable structural components such as down logs, snags, and large trees.
- Assurance that forests in the Matrix provide for connectivity between Late-Successional Reserves.
- Provision of habitat for a variety of organisms associated with early and late-successional forests.

## Implementation Monitoring

### Questions

1. Are suitable numbers of snags, coarse woody debris, and green trees being left in a manner that meets the needs of species and provides for ecological function in harvested areas following timber harvest as called for in the SEIS ROD Standards and Guidelines and RMP management direction?
2. Are timber sales being designed to meet ecosystem goals for the Matrix?
3. Are late-successional stands being retained in fifth-field watersheds in which federal forest lands have 15 percent or less late-successional forest?

### Monitoring Requirements

1. Each year at least 20 percent of regeneration harvest timber sales in each resource area will be selected for examination by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will also be inventoried pre- and post-harvest to determine if SEIS ROD and RMP down log retention direction has been followed.

2. At least 20 percent of the files on each year's timber sales will be reviewed annually to determine if ecosystem goals were addressed in the silvicultural prescriptions.
3. All proposed regeneration harvest timber sales in watersheds with less than 15 percent late-successional forest remaining will be reviewed prior to sale to ensure that a watershed analysis has been completed.

## Effectiveness and Validation Monitoring

### Questions

1. Are stands growing at a rate that will produce the predicted yields?
2. Are forests in the Matrix providing for connectivity between Late-Successional Reserves?

### Monitoring Requirements

Deferred to the SEIS Monitoring Plan.



# Air Quality

## Expected Future Conditions and Outputs

- Attainment of National Ambient Air Quality Standards, and goals for the Prevention of Significant Deterioration and the Oregon Visibility Protection and Smoke Management Plan.
- Maintenance and enhancement of air quality and visibility in a manner consistent with the Clean Air Act and the State Implementation Plan.

## Implementation Monitoring

### Questions

1. Were efforts made to minimize the amount of particulate emissions from prescribed burns?
2. Are dust abatement measures used during construction activities and on roads during BLM timber harvest operations and other BLM commodity hauling activities?
3. Are conformity determinations being prepared prior to activities which may: contribute to a new violation of the National Ambient Air Quality Standards, increase the frequency or severity of an existing violation, or delay the timely attainment of a standard?

### Monitoring Requirements

1. Each year at least 20 percent of prescribed burn projects will be randomly selected for monitoring to assess what efforts were made to minimize particulate emissions, and to assess whether the environmental analysis that preceded the decision to burn addressed the questions set forth in the SEIS discussion of Emission Monitoring (pg. 3&4-100).
2. Each year at least 20 percent of the construction activities and commodity hauling activities will be monitored to determine if dust abatement measures were implemented.
3. The Annual Program Summary will address Implementation Question 3.

## Effectiveness and Validation Monitoring

### Questions

1. What techniques were the most effective in minimizing the amount of particulate emissions from prescribed burns?
2. Are BLM prescribed burns contributing to intrusions into Class I areas or nonattainment areas?
3. Of the intrusions that the BLM is reported to be responsible for, what was the cause and what can be done to minimize future occurrences?
4. Are BLM prescribed underburns causing adverse air quality impacts to rural communities?
5. Are prescribed fires decreasing the actual or potential impacts from wildfire emissions?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Water and Soils

## Expected Future Conditions and Outputs

- Restoration and maintenance of the ecological health of watersheds. See Aquatic Conservation Strategy objectives.
- Compliance with state water quality requirements to restore and maintain water quality to protect recognized beneficial uses.
- Improvement and/or maintenance of soil productivity.
- Reduction of existing road mileage within Key Watersheds.

## Implementation Monitoring

### Questions

1. Are site-specific Best Management Practices identified as applicable during interdisciplinary review carried forward into project design and execution?
2. What watershed analyses have been or are being performed? Are watershed analyses being performed prior to management activities in Key Watersheds?
3. What is the status of identification of instream flow needs for the maintenance of channel conditions, aquatic habitat, and riparian resources?
4. What watershed restoration projects are being developed and implemented?
5. What fuel treatment and fire suppression strategies have been developed to meet Aquatic Conservation Strategy objectives?
6. What is the status of development of road or transportation management plans to meet Aquatic Conservation Strategy objectives?
7. What is the status of preparation of criteria and standards which govern the operation, maintenance, and design for the construction and reconstruction of roads?
8. What is the status of the reconstruction of roads and associated drainage features identified in watershed analysis as posing a substantial risk? What is the status of closure or elimination of roads to further Aquatic Conservation Strategy objectives and to reduce the overall road mileage within Key Watersheds? If funding is insufficient to implement road mileage reductions, are construction and authorizations through discretionary permits denied to prevent a net increase in road mileage in Key Watersheds?
9. What is the status of reviews of ongoing research in Key Watersheds to ensure that significant risk to the watershed does not exist?
10. What is the status of evaluation of recreation, interpretive, and user-enhancement activities/facilities to determine their effects on the watershed? What is the status of eliminating or relocating these activities/facilities when found to be in conflict with Aquatic Conservation Strategy objectives?
11. What is the status of cooperation with other agencies in the development of watershed-based Research Management Plans and other cooperative agreements to meet Aquatic Conservation Strategy objectives? What is the status of cooperation with other agencies to identify and eliminate wild ungulate impacts which are inconsistent with attainment of Aquatic Conservation Strategy objectives?



## Monitoring Requirements

1. Each year at least 20 percent of the timber sales and other relevant actions stratified by management category will be randomly selected for monitoring to determine whether Best Management Practices (BMPs) were implemented as prescribed. The selection of management actions to be monitored will be based on beneficial uses likely to be impacted, and for which BMPs are being prescribed.
2. Compliance checks will be completed for all agreements entered into with providers of municipal water.
3. The Annual Program Summary will address Implementation Questions 3-11.

## Effectiveness and Validation Monitoring

### Questions

1. Is the ecosystem function of the watersheds improving?
2. Are State water quality criteria being met? When State water quality criteria is met, are the beneficial uses of riparian areas protected?
3. Are prescribed Best Management Practices maintaining or restoring water quality consistent with basin specific State water quality criteria for protection of specified beneficial uses?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Wildlife Habitat

## Expected Future Conditions and Outputs

- Maintenance of biological diversity and ecosystem health to contribute to healthy wildlife populations.

## Implementation Monitoring

### Questions

1. Are suitable (diameter, length and numbers) of snags, coarse woody debris, and green trees being left in a manner that meets the needs of species and provides for ecological functions in harvested areas as called for in the SEIS ROD Standards and Guidelines and RMP management direction?
2. Are special habitats being identified and protected?
3. What is the status of designing and implementing wildlife habitat restoration projects?
4. What is the status of designing and constructing wildlife interpretive and other user-enhancement facilities?

### Monitoring Requirements

1. Each year at least 20 percent of regeneration harvest timber sales in each resource area will be selected for examination by pre- and post-harvest (and after site preparation) inventories to determine snag and green tree numbers, heights, diameters and distribution within harvest units. The measure of distribution of snags and green trees will be the percent in the upper, middle and lower thirds of the sale units monitored. Snags and green trees left following timber harvest activities (including site preparation for reforestation) will be compared to those that were marked prior to harvest.

The same timber sales will also be inventoried pre- and post-harvest to determine if SEIS ROD and RMP down log retention direction has been followed.

2. Each year at least 20 percent of BLM actions within each resource area, on lands including or near special habitats, will be examined to determine whether special habitats were protected.
3. The Annual Program Summary will address Implementation Questions 3 and 4.

## Effectiveness and Validation Monitoring

### Questions

1. Are habitat conditions for late-successional forest associated species maintained where adequate and restored where inadequate?
2. Are the snags, green trees, and coarse woody debris being left achieving the habitat necessary to attain the desired population at a relevant landscape level?
3. Are BLM actions intended to protect special habitats actually protecting the habitat? Is the protection of special habitats helping to protect the species population?
4. What are the effects of management on species richness (numbers and diversity)?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan (which will address a variety of wildlife species such as amphibians, mollusks, and neotropical migratory birds).



# Fish Habitat

## Expected Future Conditions and Outputs

- See Aquatic Conservation Strategy Objectives.
- Maintenance or enhancement of the fisheries potential of streams and other waters, consistent with BLM's *Anadromous Fish Habitat Management on Public Lands* guidance, BLM's *Fish and Wildlife 2000 Plan*, the Bring Back the Natives initiative, and other nationwide initiatives.
- Rehabilitation and protection of at-risk fish stocks and their habitat.

## Implementation Monitoring

### Questions

1. Are at-risk fish species and stocks being identified?
2. Are fish habitat restoration and enhancement activities being designed and implemented which contribute to attainment of Aquatic Conservation Strategy Objectives?
3. Are potential adverse impacts to fish habitat and fish stocks being identified?

### Monitoring Requirements

1. The Annual Program Summary will report on the status of watershed analysis to identify at-risk fish species and stocks, their habitat within individual watersheds, and restoration project needs.
2. The Annual Program Summary will report on the status of the design and implementation of fish habitat restoration and habitat activities.
3. The Annual Program Summary will report on the status of cooperation with federal, tribal, and state fish management agencies to identify and eliminate impacts associated with poaching, harvest, habitat manipulation, and fish stocking which threaten the continued existence and distribution of native fish stocks inhabiting federal lands. The Summary will also identify any management activities or fish interpretive and other user-enhancement facilities which have detrimental effects on native fish stocks.
4. At least 20 percent of the files on each year's timber sales and other relevant actions will be reviewed annually to evaluate documentation regarding fish species and habitat and related recommendations and decisions in light of policy and SEIS ROD Standards and Guidelines and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document, and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.

## Effectiveness and Validation Monitoring

### Questions

1. Is the ecological health of the aquatic ecosystems recovering or sufficiently maintained to support stable and well-distributed populations of fish species and stocks?
2. Is fish habitat in terms of quantity and quality of rearing pools, coarse woody debris, water temperature, and width to depth ratio being maintained or improved as predicted?



- Are desired habitat conditions for listed, sensitive, and at-risk fish stocks maintained where adequate and restored where inadequate?

## Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Special Status and SEIS Special Attention Species Habitat

## Expected Future Conditions and Outputs

- Protection, management, and conservation of federal listed and proposed species and their habitats to achieve their recovery in compliance with the Endangered Species Act (ESA) and Bureau special status species policies.
- Conservation of federal candidate and Bureau sensitive species and their habitats so as not to contribute to the need to list and recover the species.
- Conservation of state listed species and their habitats to assist the state in achieving management objectives.
- Maintenance or restoration of community structure, species composition, and ecological processes of special status plant and animal habitat.
- Protection of Bureau assessment species and SEIS special attention species so as not to elevate their status to any higher level of concern.

## Implementation Monitoring

### Questions

1. Are special status species being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb special status species, are steps taken to adequately mitigate disturbances?
2. Are the actions identified in plans to recover species being implemented in a timely manner?
3. What coordination with other agencies has occurred in the management of special status species?
4. What land acquisitions occurred or are underway to facilitate the management and recovery of special status species?
5. What site-specific plans for the recovery of special status species were, or are being, developed?
6. What is the status of analysis which ascertains species requirements or enhances the recovery or survival of a species?
7. What is the status of efforts to maintain or restore the community structure, species composition, and ecological processes of special status plant and animal habitat?

### Monitoring Requirements

1. Each year at least 20 percent of all management actions will be selected for examination prior to project initiation and re-examined following project completion to evaluate documentation regarding special status species and related recommendations and decisions in light of ESA requirements, policy, SEIS ROD Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document, and the actions will be reviewed on the ground after their completion to ascertain whether the mitigation was carried out as planned.



2. Review implementation schedule and actions taken annually to ascertain if the actions to recover species were carried out as planned.
3. The Annual Program Summary will address Implementation Questions 3-7.

## Effectiveness and Validation Monitoring

### Questions

1. Are trends for special status species meeting the objectives of mitigation and/or conservation actions?
2. Have any federal candidates, Bureau assessment, or Bureau sensitive species been elevated to higher levels of concern due to BLM management?
3. Were desired habitat conditions for the northern spotted owl and marbled murrelet maintained where adequate and restored where inadequate?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan (which will address a variety of special status species including marbled murrelet, bald eagle, northern spotted owl, and anadromous fish species).



# Special Areas

## Expected Future Conditions and Outputs

- Maintenance, protection, and/or restoration of the relevant and important values of the special areas which include: Areas of Critical Environmental Concern (ACECs), Research Natural Areas (RNAs), and Environmental Education Areas (EEAs).
- Provision of recreation uses and environmental education in several ACECs. Management of uses to prevent damage to those values that make the area outstanding.
- Preservation, protection, or restoration of native species composition and ecological processes of biological communities in RNAs.
- Provision and maintenance of environmental education opportunities in EEAs. Management of uses to minimize disturbances of educational values.
- Retention of existing Research Natural Areas and existing Areas of Critical Environmental Concern that meet the test for continued designation. Retention of other special areas. Provision of new special areas where needed to maintain or protect important values.

## Implementation Monitoring

### Questions

1. Are BLM actions and BLM authorized actions/uses near or within special areas consistent with RMP objectives and management direction for special areas?
2. What is the status of the preparation, revision, and implementation of ACEC management plans?
3. What environmental education and research initiatives and programs are occurring in the RNAs and EEAs?
4. Are existing BLM actions and BLM authorized actions and uses not consistent with management direction for special areas being eliminated or relocated?
5. Are actions being identified which are needed to maintain or restore the important values of the special areas? Are the actions being implemented?
6. Are protection buffers being provided for specific rare and locally endemic species and other species in habitats identified in the SEIS ROD?

### Monitoring Requirements

1. Annually, at least 20 percent of the files on all actions and research proposals within and adjacent to special areas will be reviewed to determine whether the possibility of impacts on ACEC values was considered, and whether any mitigation identified as important for maintenance of ACEC values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.
2. The Annual Program Summary will address Implementation Questions 2-6.



## Effectiveness and Validation Monitoring

### Questions

1. Are the implemented management actions designed to protect the values of the special areas effective?
2. Are the special areas managed to restore, or prevent the loss of, outstanding values and to minimize disturbance?

### Monitoring Requirements

1. Each special area will be monitored at least every three years to determine if the values for which it was designated are being maintained.
2. Each ACEC where proactive management actions have been implemented will be monitored annually for the first three years and after that every three years, or until objectives are met, to determine if these actions met their objectives.



# Cultural Resources Including American Indian Values

## Expected Future Conditions and Outputs

- Identification of cultural resource localities for public, scientific, and cultural heritage purposes.
- Conservation and protection of cultural resource values for future generations.
- Provision of information on long-term environmental change and past interactions between humans and the environment.
- Fulfillment of responsibilities to appropriate American Indian groups regarding heritage and religious concerns.

## Implementation Monitoring

### Questions

1. Are cultural resources being addressed in deciding whether or not to go forward with forest management and other actions? During forest management and other actions that may disturb cultural resources, are steps taken to adequately mitigate disturbances?
2. What mechanisms have been developed to describe past landscapes and the role of humans in shaping those landscapes?
3. What efforts are being made to work with American Indian groups to accomplish cultural resource objectives and achieve goals outlined in existing memoranda of understanding and to develop additional memoranda as needs arise?
4. What public education and interpretive programs were developed to promote the appreciation of cultural resources?

## Monitoring Requirements

1. At least 20 percent of the files on each year's timber sales and other relevant actions (e.g., rights-of-way and instream structures) will be reviewed annually to evaluate documentation regarding cultural resources and American Indian values and decisions in light of requirements, policy, SEIS ROD Standards and Guidelines, and RMP management direction. If mitigation was required, review will ascertain whether such mitigation was incorporated in the authorization document, and the actions will be reviewed on the ground after completion to ascertain whether the mitigation was carried out as planned.
2. The Annual Program Summary will address Implementation Questions 2-4.

## Effectiveness and Validation Monitoring

### Questions

1. Are sites of religious and cultural heritage adequately protected?
2. Do American Indians have access to, and use of, forest species, resources, and places important for cultural, subsistence, or economic reasons—particularly those identified in treaties?



## Monitoring Requirements

1. All cultural resource sites where management and/or mitigation measures are utilized to protect the resource will be monitored at least once a year to determine if the measures were effective.

The balance is deferred to the SEIS Monitoring Plan.



# Visual Resources

## Expected Future Conditions and Outputs

- Preservation or retention of the existing character of landscapes on BLM-administered lands allocated for VRM Class I and II management; partial retention of the existing character on lands allocated for VRM Class III management; and major modification of the existing character of some lands allocated for VRM Class IV management.
- Continuation of emphasis on management of scenic resources in selected high-use areas to retain or preserve scenic quality.

## Implementation Monitoring

### Questions

1. Are visual resource design features and mitigation methods being followed during timber sales and other substantial actions in Class II and III areas?

### Monitoring Requirements

1. Twenty percent of the files for timber sales and other substantial projects in VRM Class II or III areas will be reviewed to ascertain whether relevant design features or mitigating measures were included.

## Effectiveness and Validation Monitoring

### Questions

1. Are timber sales and other major actions in Class II and Class III areas meeting or exceeding visual resource management objectives?
2. Are visual resource management objectives being met consistently, over long periods of time, in Class II management areas?

### Monitoring Requirements

1. Each year all timber sales and other selected projects in VRM Class II areas, and at least 20 percent of sales or projects in Class III areas that have special design features or mitigating measures for visual resource protection, will be selected for monitoring to evaluate the effectiveness of the practices used to conserve visual resources.
2. In VRM Class II management areas where two or more sales or actions have occurred, impacts will be monitored at a minimum interval of five years.



# Wild and Scenic Rivers

## Expected Future Conditions and Outputs

- Protection of the outstandingly remarkable values (ORVs) of designated components of the National Wild and Scenic Rivers System through the maintenance and enhancement of the natural integrity of river-related values.
- Protection of the ORVs of eligible/suitable Wild and Scenic Rivers and the maintenance or enhancement of the highest tentative classification pending resolution of suitability and/or designation.
- Protection of the natural integrity of river-related values for the maintenance or enhancement of the highest tentative classification determination for rivers found eligible or studied for suitability.

## Implementation Monitoring

### Questions

1. Are BLM actions and BLM authorized actions consistent with protection of the ORVs of designated, suitable, and eligible, but not studied, rivers?

### Monitoring Requirements

1. Annually, the files on all actions and research proposals within and adjacent to Wild and Scenic River corridors will be reviewed to determine whether the possibility of impacts on the outstandingly remarkable values was considered, and whether any mitigation identified as important for maintenance of the values was required. If mitigation was required, the relevant actions will be reviewed on the ground, after completion, to ascertain whether it was actually implemented.
2. The Annual Program Summary will report progress on preparation and revision of Wild and Scenic River management plans, their conformance with the Aquatic Conservation Strategy objectives, and the degree to which these plans have been implemented.

## Effectiveness and Validation Monitoring

### Questions

1. Are the ORVs for which the Wild and Scenic Rivers were designated being maintained?
2. Are the ORVs of the rivers which were found suitable or eligible, but not studied, protected?

### Monitoring Requirements

1. Each river that was found suitable or eligible, but was not studied, will be monitored at least once a year to determine if the ORVs are being maintained.



# Rural Interface Areas

## Expected Future Conditions and Outputs

- Consideration of the interests of adjacent and nearby rural landowners (including residents) during analysis, planning, and monitoring related to managed rural interface areas. (These interests include personal health and safety, improvements to property, and quality of life.)
- Determination of how landowners might be, or are, affected by activities on BLM-administered land.

## Implementation Monitoring

### Questions

1. Are design features and mitigation measures developed and implemented to avoid/minimize impacts to health, life, property, and quality of life and to minimize the possibility of conflicts between private and federal land management?

### Monitoring Requirements

1. Each year at least 20 percent of all actions within the identified rural interface areas will be selected for examination to determine if special project design features and mitigation measures were included and implemented as planned.

## Effectiveness and Validation Monitoring

### Questions

1. Are the rural interface area design features and mitigation measures effective in minimizing impacts to health, life, and property?

### Monitoring Requirement

1. Each year at least 20 percent of actions within the identified rural interface areas which had design features or mitigation measures will be selected for examination following completion to assess the effectiveness of the action.



# Socioeconomic Conditions

## Expected Future Conditions and Outputs

- Contribution to local, state, national, and international economies through sustainable use of BLM-managed lands and resources and use of innovative contracting and other implementation strategies.
- Provision of amenities for the enhancement of communities as places to live and work.

## Implementation Monitoring

### Questions

1. What strategies and programs have been developed, through coordination with state and local governments, to support local economies and enhance local communities?
2. Are RMP implementation strategies being identified that support local economies?
3. What is the status of planning and developing amenities (such as recreation and wildlife viewing facilities) that enhance local communities?

### Monitoring Requirements

1. The Annual Program Summary will address Implementation Questions 1-3.

## Effectiveness and Validation Monitoring

### Questions

1. What level of local employment is supported by BLM timber sales and forest management practices?
2. What were O&C and CBWR payments to counties?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Recreation

## Expected Future Conditions and Outputs

- Provision of a wide range of developed and dispersed recreation opportunities that contribute to meeting projected recreation demand within the planning area.
- Provision of nonmotorized recreational opportunities and creation of additional opportunities consistent with other management objectives.

## Implementation Monitoring

### Questions

1. What is the status of the development and implementation of recreation plans?

### Monitoring Requirements

1. The Annual Program Summary will address Implementation Question 1.

## Effectiveness and Validation Monitoring

### Questions

1. Based on the Statewide Comprehensive Outdoor Recreation Plan (SCORP) supply and demand data and public comments, is the range of recreation opportunities on BLM-administered lands (i.e., roaded versus unroaded) meeting public needs?
2. Are BLM developed recreation facilities meeting public needs and expectations, including facility condition and visitor safety considerations?
3. Are off-highway vehicle designations adequate to protect resource values while providing appropriate motorized vehicle recreation opportunities?

### Monitoring Requirements

1. Each Special Recreation Management Area will be monitored at least every three years to determine if the types of recreation opportunities being provided are appropriate.
2. All developed recreation sites will be monitored annually to determine if facilities are being properly managed and all deficiencies documented.
3. All OHV designations will be reviewed annually to determine if revisions are necessary to protect resource values and resolve user conflicts.



# Timber Resources

## Expected Future Conditions and Outputs

- Provision of a sustained yield of timber and other forest products.
- Reduction of the risk of stand loss due to fires, animals, insects, and diseases.
- Provision of salvage harvest for timber killed or damaged by events such as wildfire, windstorms, insects, or disease in a manner consistent with management objectives for other resources.

## Implementation Monitoring

### Questions

1. By land-use allocation, how do timber sale volumes, harvested acres, and the age and type of regeneration harvest stands compare to the projections in the SEIS ROD Standards and Guidelines and RMP management objectives?
2. Were the silvicultural (e.g., planting with genetically selected stock, fertilization, release, and thinning) and forest health practices anticipated in the calculation of the expected sale quantity implemented?

### Monitoring Requirements

1. The Annual Program Summary will report both planned and non-planned volumes sold. The report will also summarize annual and cumulative timber sale volumes, acres to be harvested, and stand ages and types of regeneration harvest for General Forest Management Areas and Connectivity/Diversity Blocks, stratified to identify them individually.
2. An annual district-wide report will be prepared to determine if the silvicultural and forest health practices identified and used in the calculation of the ASQ were implemented. This report will be summarized in the Annual Program Summary.

## Effectiveness and Validation Monitoring

### Questions

1. Is reforestation achieving desired stocking?
2. Are stands growing at a rate that will produce the predicted yields?
3. Is the long-term health and productivity of the forest ecosystem being protected in the Matrix?

### Monitoring Requirements

1. First, third and fifth year surveys will be used to determine if reforestation is meeting reforestation objectives.

The balance is deferred to the SEIS Monitoring Plan.



# Special Forest Products

## Expected Future Conditions and Outputs

- Production and sale of special forest products when demand is present and where actions taken are consistent with primary objectives for the land use allocation.
- Utilization of the principles of ecosystem management to guide the management and harvest of special forest products.

## Implementation Monitoring

### Questions

1. Is the sustainability and protection of special forest product resources ensured prior to selling special forest products?
2. What is the status of the development and implementation of specific guidelines for the management of individual special forest products?

### Monitoring Requirements

1. The Annual Program Summary will address Implementation Questions 1 and 2.

## Effectiveness and Validation Monitoring

### Questions

1. Are special forest products being harvested at a sustainable level?

### Monitoring Requirements

Deferred to SEIS Monitoring Plan.



# Noxious Weeds

## Expected Future Conditions and Outputs

- Containment and/or reduction of noxious weed infestations on BLM-administered land using an integrated pest management approach.
- Avoidance of the introduction or spread of noxious weed infestations in all areas.

## Implementation Monitoring

### Questions

1. Are noxious weed control methods compatible with Aquatic Conservation Strategy objectives?

### Monitoring Requirements

1. Review the files of at least 20 percent of each year's noxious weed control applications to determine if noxious weed control methods were compatible with Aquatic Conservation Strategy objectives.

## Effectiveness and Validation Monitoring

### Questions

1. Are management actions effectively containing or reducing the extent of noxious weed infestations?

### Monitoring Requirements

1. At least 20 percent of the noxious weed sites subjected to treatment will be monitored to determine if the treatment was effective.



# Fire/Fuels Management

## Expected Future Conditions and Outputs

- Provision of the appropriate suppression responses to wildfires to meet resource management objectives and to minimize the risk of large-scale, high intensity wildfires.
- Utilization of prescribed fire to meet resource management objectives. (This will include, but not be limited to, fuels management for wildfire hazard reduction, restoration of desired vegetation conditions, management of habitat, and silvicultural treatments.)
- Adherence to smoke management/air quality standards of the Clean Air Act and State Implementation Plan standards for prescribed burning.

## Implementation Monitoring

### Questions

1. What is the status of the preparation and implementation of fire management plans for Late Successional Reserves and Adaptive Management Areas?
2. Have additional analysis and planning been completed to allow some natural fires to burn under prescribed conditions?
3. Do wildfire suppression plans emphasize maintaining late-successional habitat?
4. Are Wildfire Situation Analyses being prepared for wildfires that escape initial attack?
5. What is the status of the interdisciplinary team preparation and implementation of fuel hazard reduction plans?

### Monitoring Requirements

1. The Annual Program Summary will address Implementation Questions 1-5.

## Effectiveness and Validation Monitoring

### Questions

1. Are fire suppression strategies, practices, and activities meeting resource management objectives and concerns?
2. Are prescribed fires applied in a manner which retains the amount of coarse woody debris, snags, and duff at levels determined through watershed analysis?
3. Are fuel profiles being modified to lower the potential of fire ignition and rate of spread and to protect and support land use allocation objectives by lowering the risk of high intensity, stand-replacing wildfires?

### Monitoring Requirements

Deferred to the SEIS Monitoring Plan.



# Nxious Weeds

## Fire/Fuels Management

### Expected Future Conditions and Outputs

- 1. The expected future conditions and outputs of the project are as follows: (a) The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

- 2. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

### Implementation Monitoring

- 1. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

### Effectiveness and Validation Monitoring

- 1. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

- 2. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

- 3. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

### Monitoring Requirements

- 1. The Annual Program Summary will address the following questions: (a) The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

### Effectiveness and Validation Monitoring

#### Questions

- 1. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

- 2. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

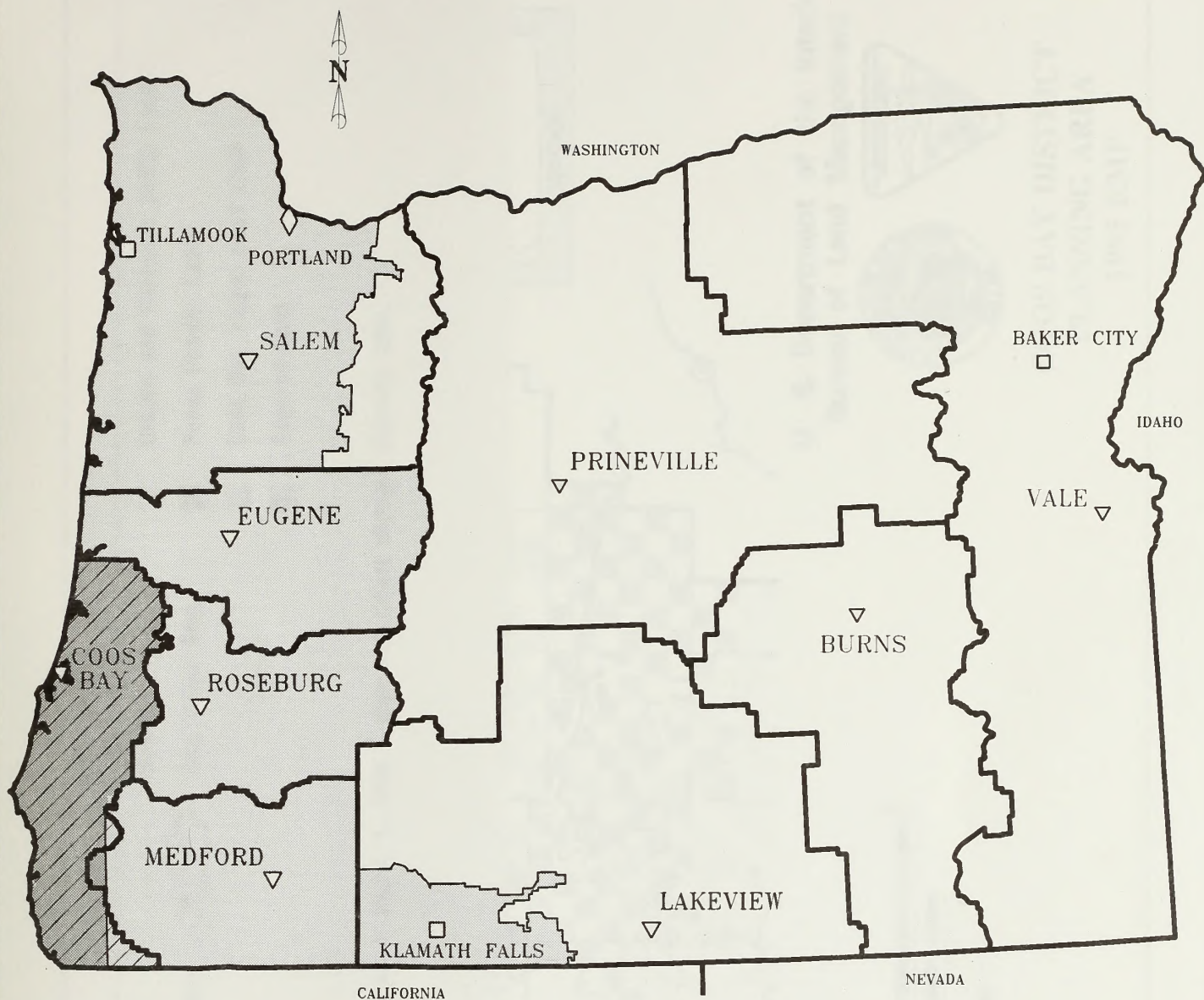
- 3. The project will result in the establishment of a fire management plan that will be used to guide the management of the project area. (b) The project will result in the establishment of a fuels management plan that will be used to guide the management of the project area. (c) The project will result in the establishment of a weed management plan that will be used to guide the management of the project area.

### Monitoring Requirements

Delivered to the SEIS Monitoring Plan

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- ◇ BLM State Office
- ▽ BLM District Office
- BLM Resource Area Office
- District Boundary
- Planning Area Boundary
- ▨ Coos Bay Planning Area
- ▩ Other Western Oregon Resource Management Planning Areas
- ▤ Coos Bay District

**U.S. DEPARTMENT OF THE INTERIOR**  
**Bureau of Land Management**  
**Oregon**

**COOS BAY DISTRICT**  
**1995 RMP**  
**MAP 1**

**GENERAL LOCATION**  
**COOS BAY PLANNING AREA**





# Noxious Weeds

# Fire/Fuels Management

## Expected Future Conditions and Outcomes

- Provision of the appropriate management and control measures to meet the objectives and to minimize the risk of long-term, high level impacts on the environment and biodiversity.
- Utilization of resources for the management and control of weeds, including the use of biological, chemical, and physical control methods, and the use of integrated weed management (IWM) approaches.
- Advancement to smoke management and control measures to meet the objectives and to minimize the risk of long-term, high level impacts on the environment and biodiversity.

## Implementation Monitoring

### Questions

1. What is the status of the weed management and control measures in the area?
2. Have additional weeds been identified in the area?

### Effectiveness and Validation Monitoring

1. The weed management and control measures are effective in controlling the weeds in the area.
2. The weed management and control measures are effective in controlling the weeds in the area.
3. The weed management and control measures are effective in controlling the weeds in the area.
4. The weed management and control measures are effective in controlling the weeds in the area.
5. The weed management and control measures are effective in controlling the weeds in the area.

### Monitoring Requirements

1. The weed management and control measures are effective in controlling the weeds in the area.

## Effectiveness and Validation Monitoring

### Questions

1. The weed management and control measures are effective in controlling the weeds in the area.
2. The weed management and control measures are effective in controlling the weeds in the area.
3. The weed management and control measures are effective in controlling the weeds in the area.
4. The weed management and control measures are effective in controlling the weeds in the area.
5. The weed management and control measures are effective in controlling the weeds in the area.

### Monitoring Requirements

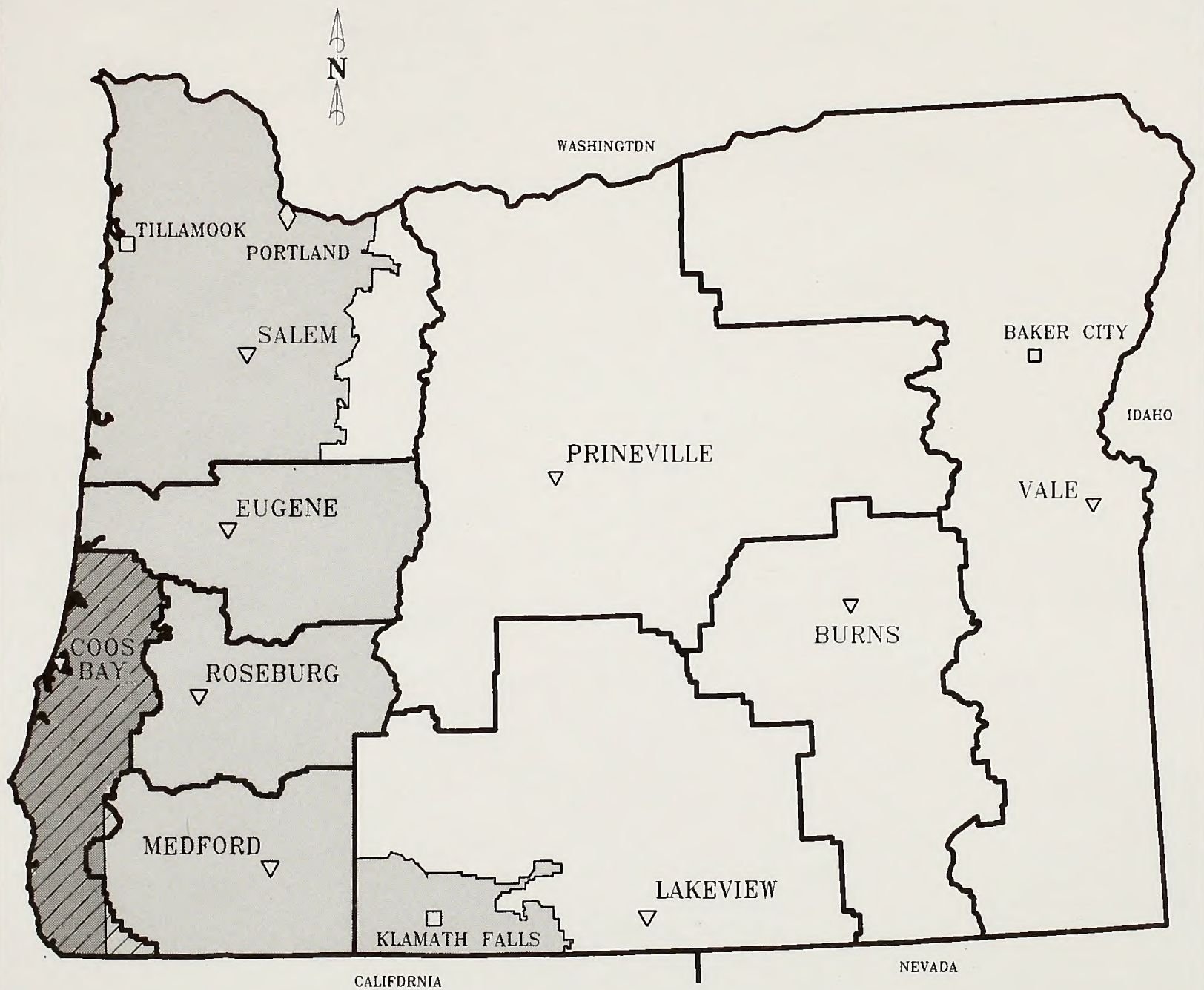
1. The weed management and control measures are effective in controlling the weeds in the area.

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- ▤ Coos Bay District

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**Bureau of Land Management**  
**Oregon**

**COOS BAY DISTRICT**  
**1995 RMP**  
**MAP 1**

**GENERAL LOCATION**  
**COOS BAY PLANNING AREA**





LEGEND

- ▼

District Office

—

Planning Area Boundary

—

Highway

—

Stream

●

City, Urban Area

■

Oregon and California (O&C) Land

■

Public Domain Land

■

Coos Bay Wagon Road Land

■

Acquired Land
- Status as of March 1, 1994 - does not reflect changes occurring later.
- D1-92-93
- The map displays the Coos Bay District Planning Area, bounded by the Pacific Ocean to the west and the Coos Bay River to the east. The area is overlaid with a grid of Range (R15W to R7W) and Township (T19S to T29S) coordinates. Key features include:   
 - Rivers: Coos River, South Fork Coos River, North Fork Coos River, Mill Creek, Little River, and Coquille River.   
 - Towns: Reedsport, North Bend, Coquille, Bandon, and Myrtle Point.   
 - Land Status: Shaded areas represent Oregon and California (O&C) Land, Public Domain Land, Coos Bay Wagon Road Land, and Acquired Land.   
 - Infrastructure: Highway 101 runs north-south along the coast, and Highway 42 runs east-west through the center.   
 - Water Bodies: Coos Bay and Winchester Bay are labeled.   
 - A north arrow is located in the upper right corner.   
 - A disclaimer text box in the upper right states: "The Bureau of Land Management cannot assure the reliability or suitability of this information for a particular purpose. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification."   
 - An inset map of Oregon in the lower right corner shows the location of the planning area within the state.
- A scale bar showing distances in miles (0 to 20) and kilometers (0 to 20).
- U. S. Department of the Interior  
Bureau of Land Management
- The official seal of the U.S. Department of the Interior, featuring a bison and the text "U.S. DEPARTMENT OF THE INTERIOR" and "BUREAU OF LAND MANAGEMENT".
- A logo for the Coos Bay District Planning Area, featuring a stylized landscape with a river, mountains, and a tree, with the text "U.S. DEPARTMENT OF THE INTERIOR" and "BUREAU OF LAND MANAGEMENT" above it.
- COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP
- MAP 2N: LAND STATUS

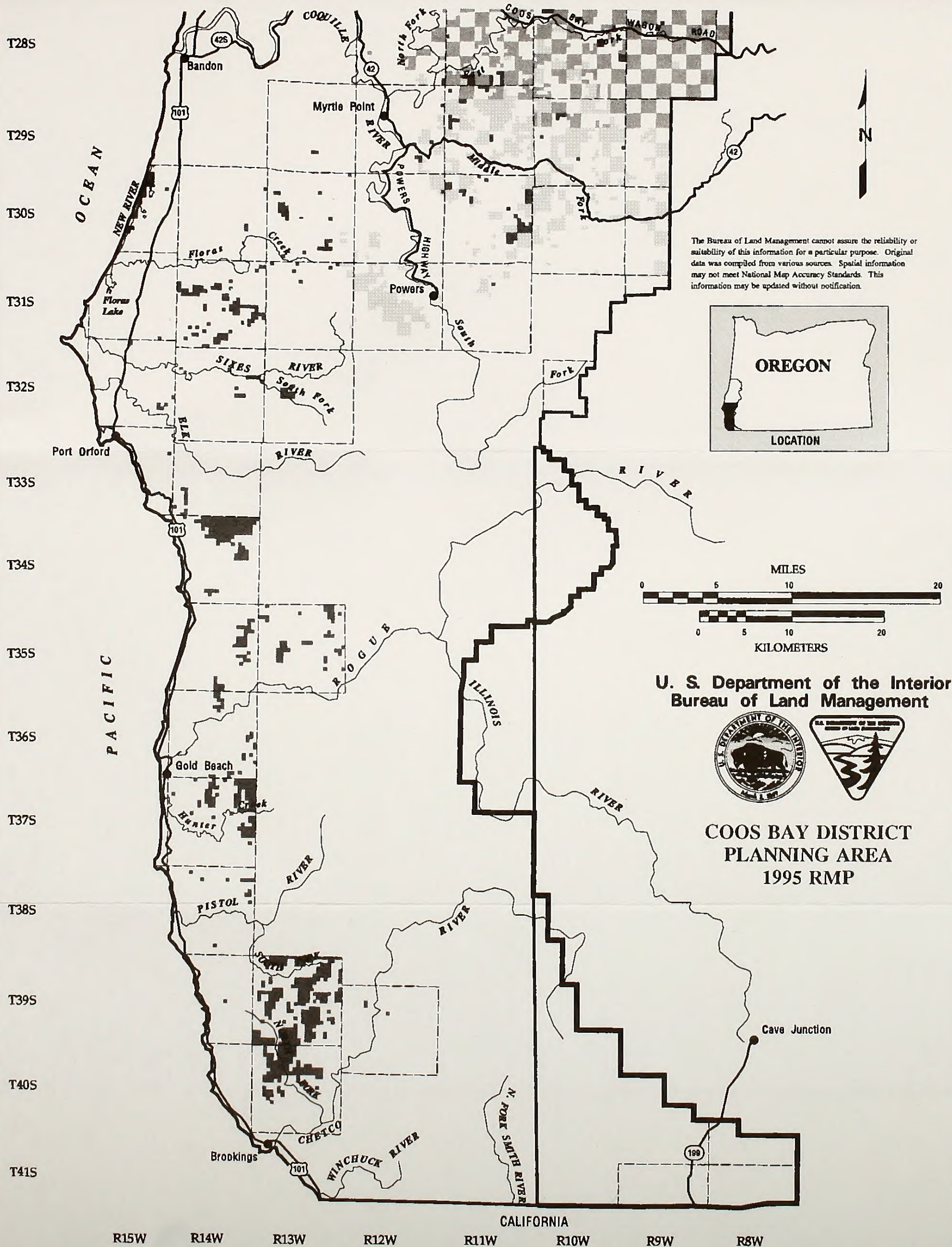


# LEGEND

- |  |                        |  |                  |  |                                  |
|--|------------------------|--|------------------|--|----------------------------------|
|  | Planning Area Boundary |  | Stream           |  | Oregon and California (O&C) Land |
|  | District Boundary      |  | City, Urban Area |  | Public Domain Land               |
|  | Highway                |  |                  |  | Coos Bay Wagon Road Land         |
|  |                        |  |                  |  | Acquired Land                    |

Status as of March 1, 1994 - does not reflect changes occurring later.

D1-9a-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 2S: LAND STATUS

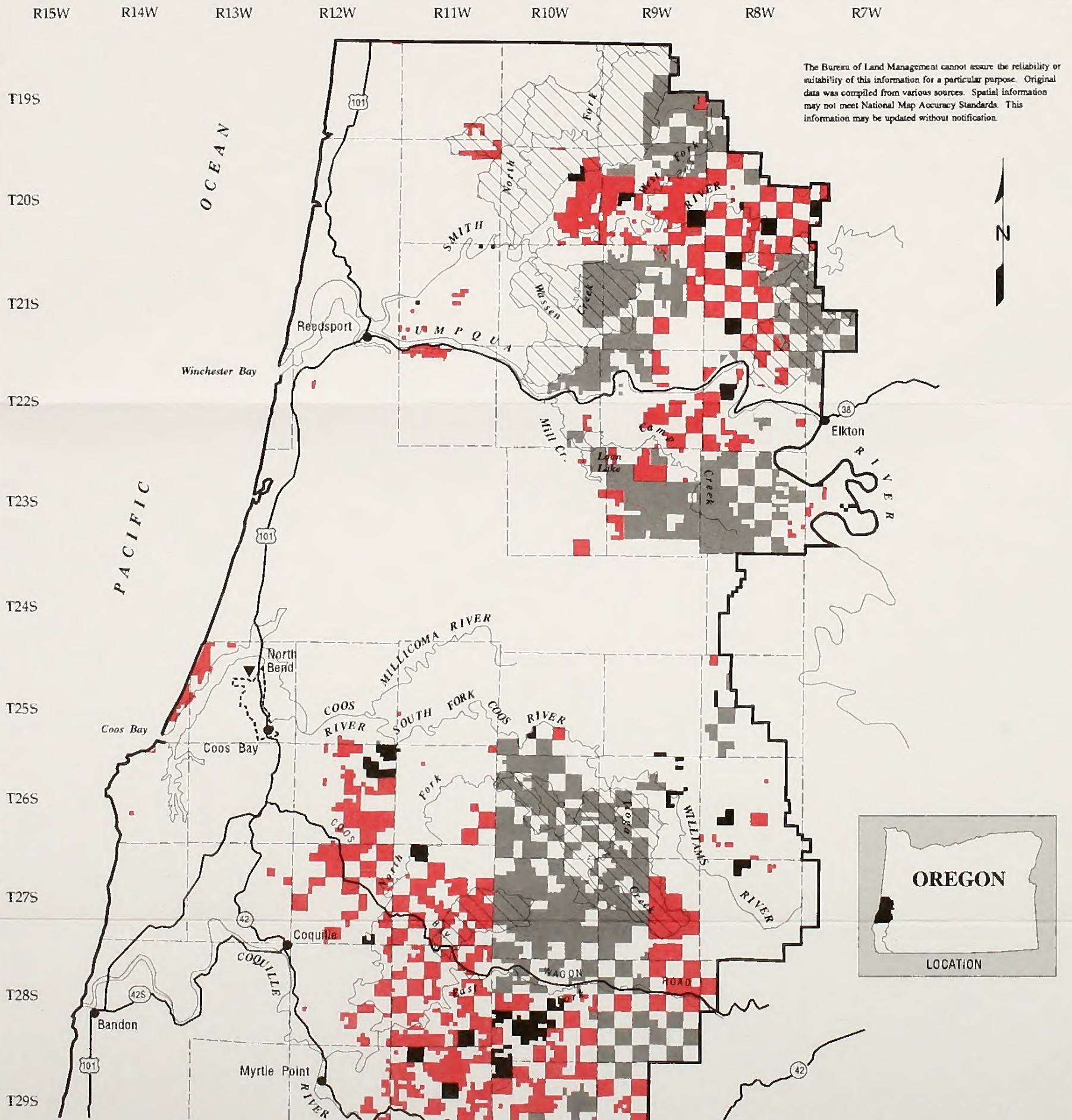


# LEGEND

- |                          |                    |                                  |
|--------------------------|--------------------|----------------------------------|
| ▼ District Office        | Stream             | ■ Late -Successional Reserve     |
| — Planning Area Boundary | ● City, Urban Area | ■ Connectivity / Diversity Block |
| — Highway                |                    | ■ General Forest Management Area |
|                          |                    | /// Tier 1 Key Watershed         |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

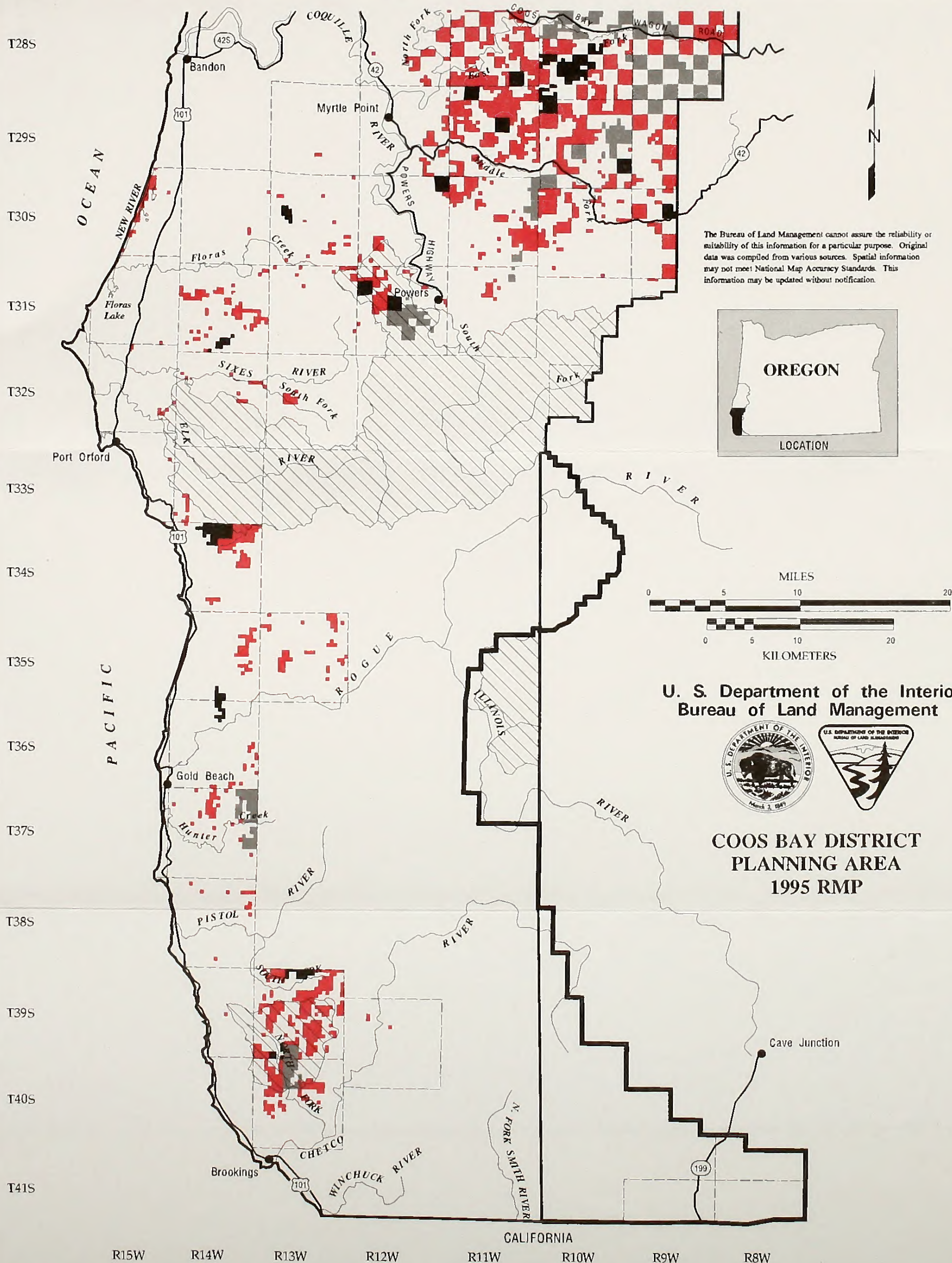


# LEGEND

- |                                                                                                          |                                                                                                    |                                                                                                                    |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|  Planning Area Boundary |  Stream           |  Late-Successional Reserve      |
|  District Boundary      |  City, Urban Area |  Connectivity / Diversity Block |
|  Highway                |                                                                                                    |  General Forest Management Area |
|                                                                                                          |                                                                                                    |  Tier 1 Key Watershed           |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-9a-93



MAP 3S: DISTRICT PLANNING STRATEGY



# LEGEND

- ▼ District Office
- Planning Area Boundary
- Highway

## Special Areas

1 = Cherry Creek RNA/ACEC

- 1P = Wassen Creek ACEC
- 2P = North Spit ACEC
- 3P = North Fork Coquille River ACEC
- 4P = Tloga Creek ACEC
- 5P = China Wall ACEC
- 6P = Upper Rock Creek ACEC

- Stream
- City, Urban Area
- BLM Administered Land

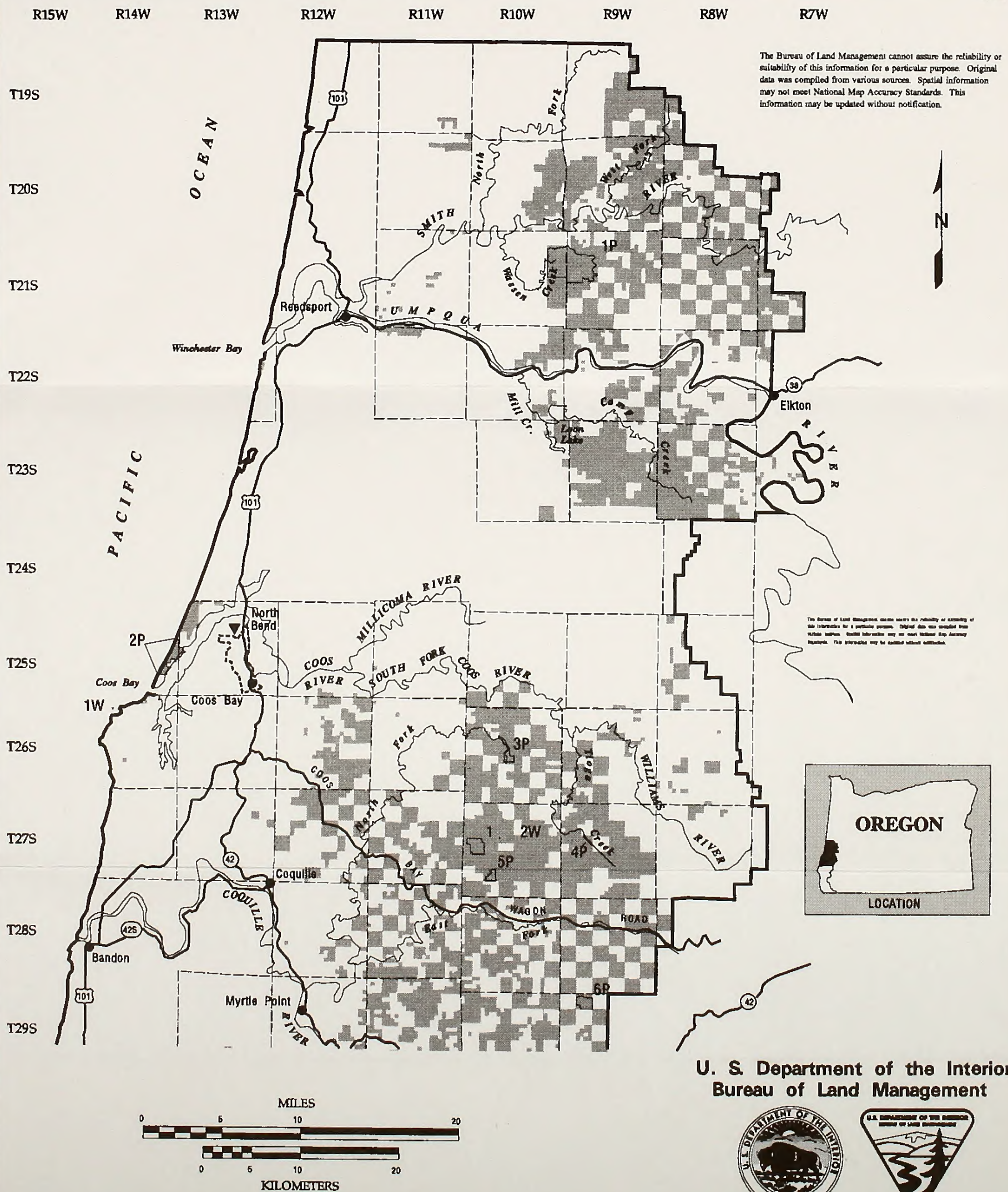
- 1 Existing Special Area
- 4P Proposed Special Area

## Wilderness and Study Areas

- 1W = Squaw Island
- 2W = Cherry Creek

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-92-93





LEGEND

- Planning Area Boundary

District Boundary

Highway

Stream

City, Urban Area

BLM Administered Land

2 Existing Special Area

7P Proposed Special Area

4W WSA

- 2 = New River ACEC

3 = Powers Environmental Education Area

6P = Upper Rock Creek ACEC

7P = North Fork Hunter Creek ACEC

8P = Hunter Creek Bog ACEC

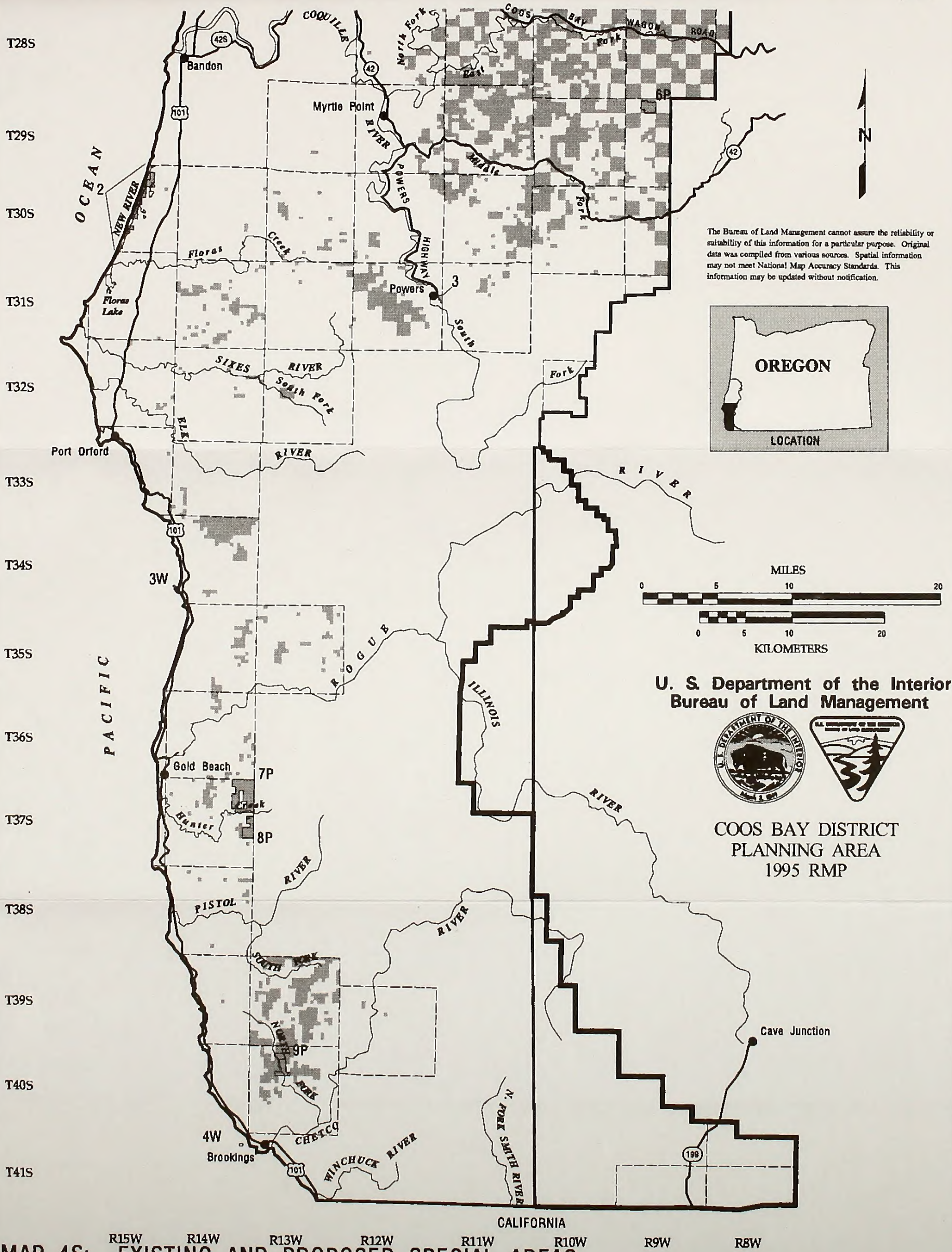
9P = North Fork Chetco River ACEC

- 3W = North Sisters rock - WSA

4W = Zwagg Island - WSA

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



MAP 4S: EXISTING AND PROPOSED SPECIAL AREAS, WILDERNESS, AND STUDY AREAS

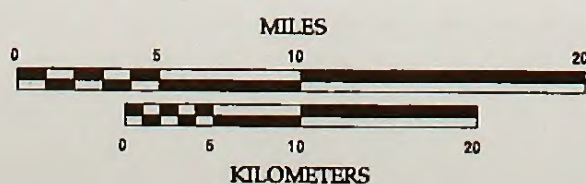
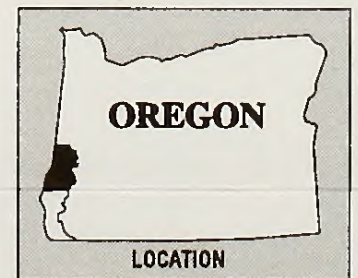
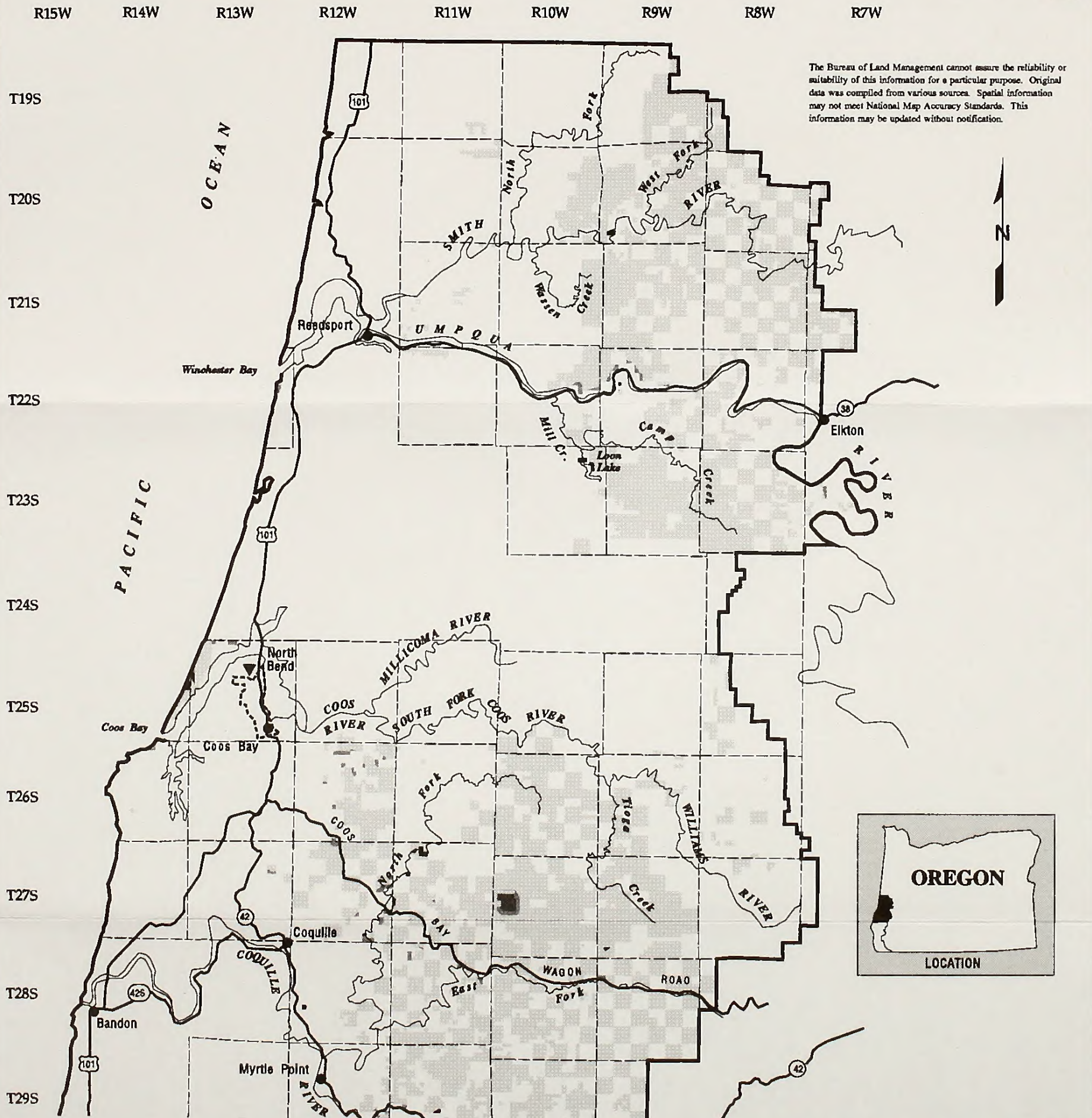


# LEGEND

- |                          |                    |                |
|--------------------------|--------------------|----------------|
| ▼ District Office        | — Stream           | ■ Class 1 Land |
| — Planning Area Boundary | ● City, Urban Area | ■ Class 2 Land |
| — Highway                |                    | ■ Class 3 Land |
|                          |                    | ■ Class 4 Land |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-0a-03



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 5N: VISUAL RESOURCE MANAGEMENT CLASSES



# LEGEND

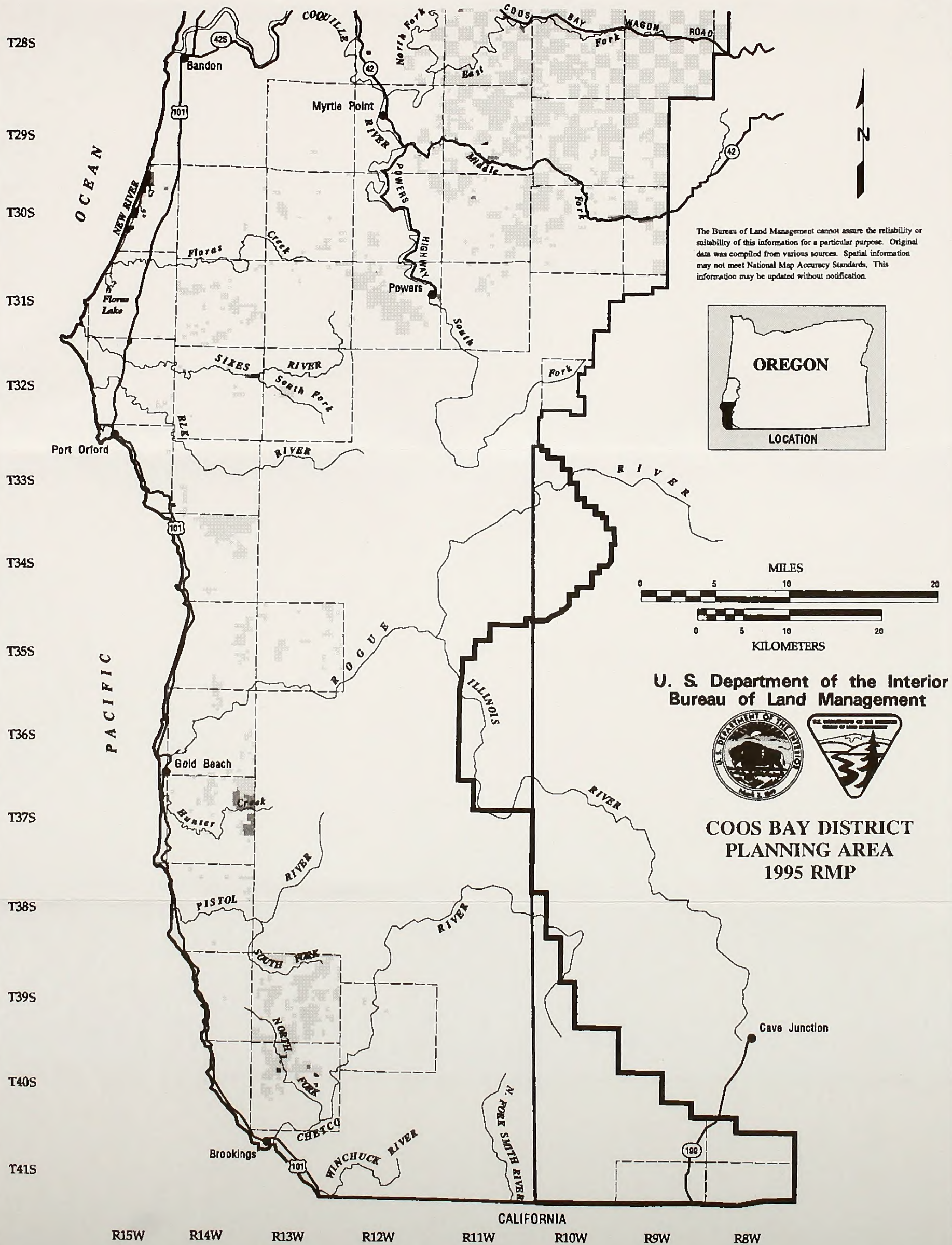
- Planning Area Boundary
- District Boundary
- Highway

- Stream
- City, Urban Area

- NONE Class 1 Land
- Class 2 Land
- Class 3 Land
- Class 4 Land

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 5S: VISUAL RESOURCE MANAGEMENT CLASSES

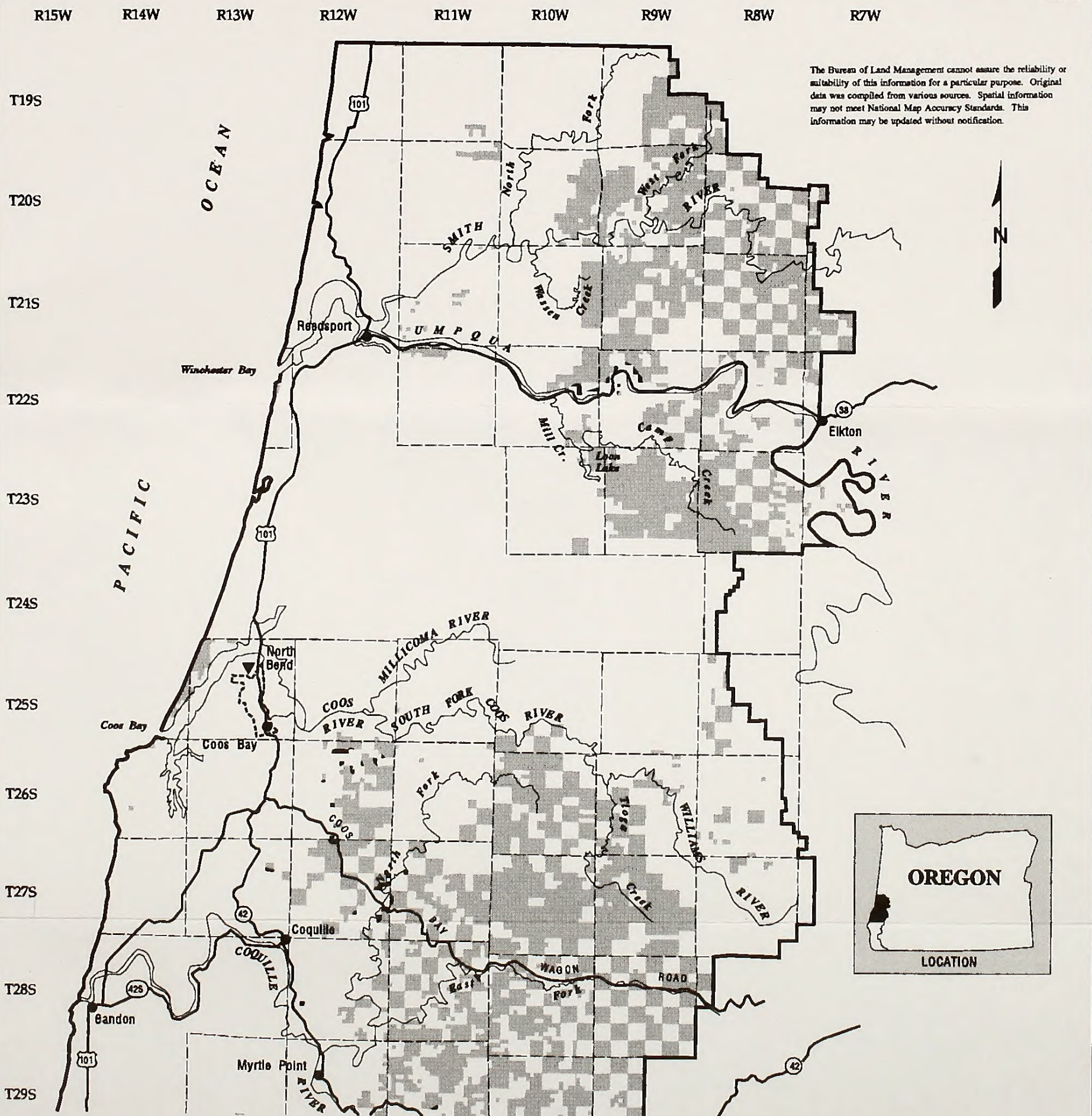


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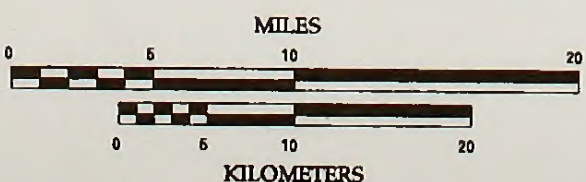
- |                          |                    |                                                                         |
|--------------------------|--------------------|-------------------------------------------------------------------------|
| ▼ District Office        | — Stream           | ■ BLM Administered Land within 1/4 mile of 0-20 acre county zoning area |
| — Planning Area Boundary | ● City, Urban Area | ■ BLM Administered Land                                                 |
| — Highway                |                    |                                                                         |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-92-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 6N: RURAL INTERFACE AREAS

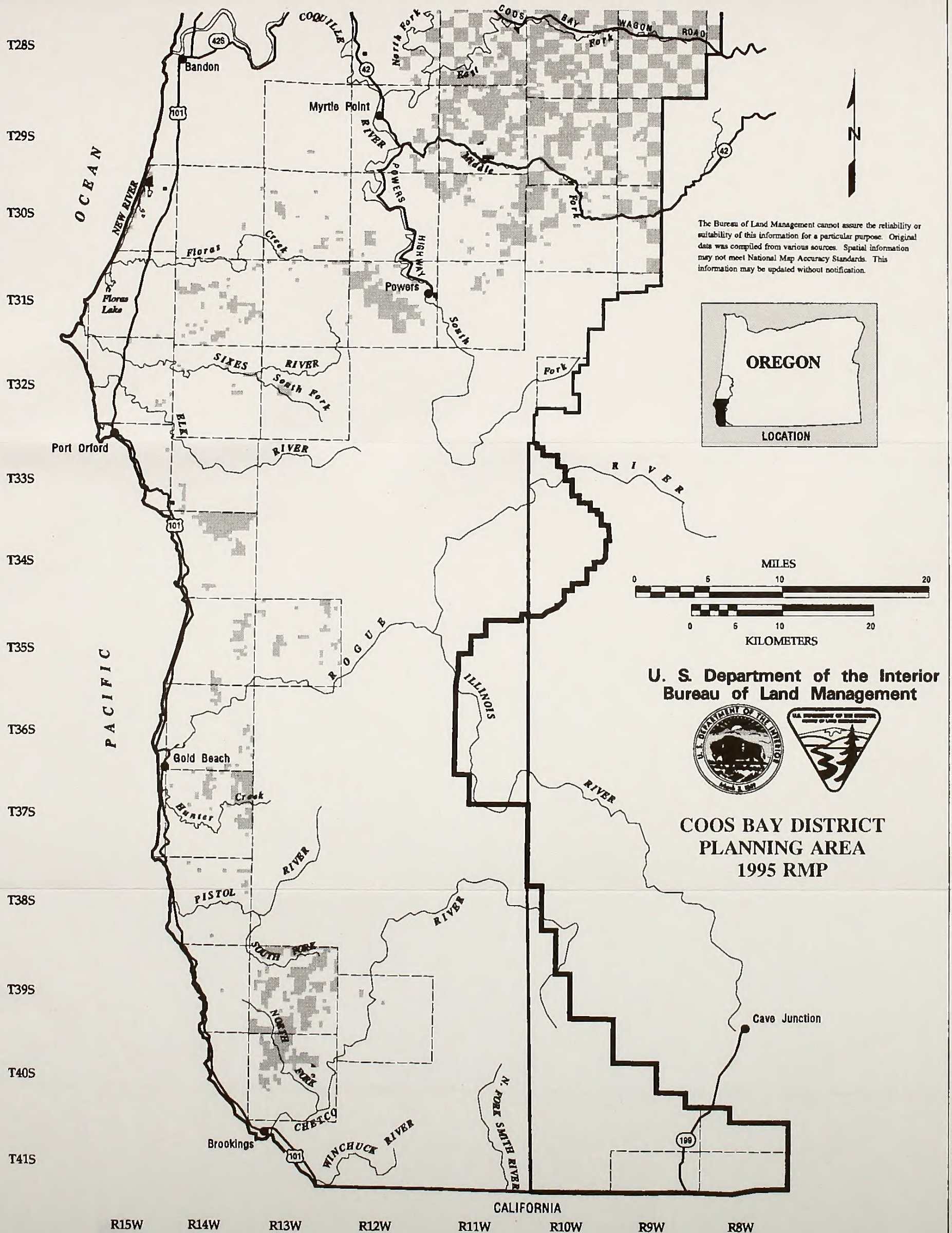


## LEGEND

-  Planning Area Boundary      Stream      BLM Administered Land within 1/4 mile of 0-20 acre county zoning area  
 District Boundary      City, Urban Area  
 Highway      BLM Administered Land

**Note:** Does not reflect some recent corrections and changes which are included on the Land Status map.

01-82-83



## MAP 6S: RURAL INTERFACE AREAS



LEGEND

- ▼

Planning Area Boundary

—

Highway

1

2

3

4

5

6

7

8

9

10

11

12
- Stream

●

City, Urban Area

■

BLM Administered Land

1P

2P

3P

4P

5P

6P

7P

8P

9P

10P

11P

12P
- <sup>5</sup>

Existing Recreation Site/Area

□<sup>3P</sup>

Proposed Recreation Site/Area

—<sup>B3P</sup>

Proposed Scenic Byway

13P

14P

15P

16P

17P

18P

B1P

B2P

B3P

B4P

B5P
- 1 = Smith River Falls

2 = Vincent Creek

3 = Dean Creek Elk Viewing Area SRMA

4 = Loon Lake / East Shore SRMA

5 = Coos Bay Shorelands SRMA

6 = North Spit Boat Ramp

7 = Laverne Park

8 = Park Creek

9 = Big Tree

10 = Burnt Mountain Cabin

11 = Frona Park

12 = Brummit Fir Trail

1P = Roman Nose / Kentucky Creek Trail

2P = Smith River Log Dump (Day Use)

3P = Fawn Creek Boat Ramp

4P = Smith River Falls Boat Ramp

5P = Vincent Creek Boat Ramp

6P = Wassen Creek Trail

7P = Big Bend

8P = Umpqua Lighthouse

9P = North Spit Public Dock

10P = Gregory Point SRMA

11P = Coos Head

12P = Tioga Basin

13P = East Fairview Boat Ramp

14P = McKinley Camp and Trail

15P = Rock Prairie Park and Boat Ramp

16P = Middle Creek Park

17P = Judge Hamilton Park

18P = Upper Rock Creek Trail

B1P = Smith River Road

B2P = South Sisters - Oxbow Access Road

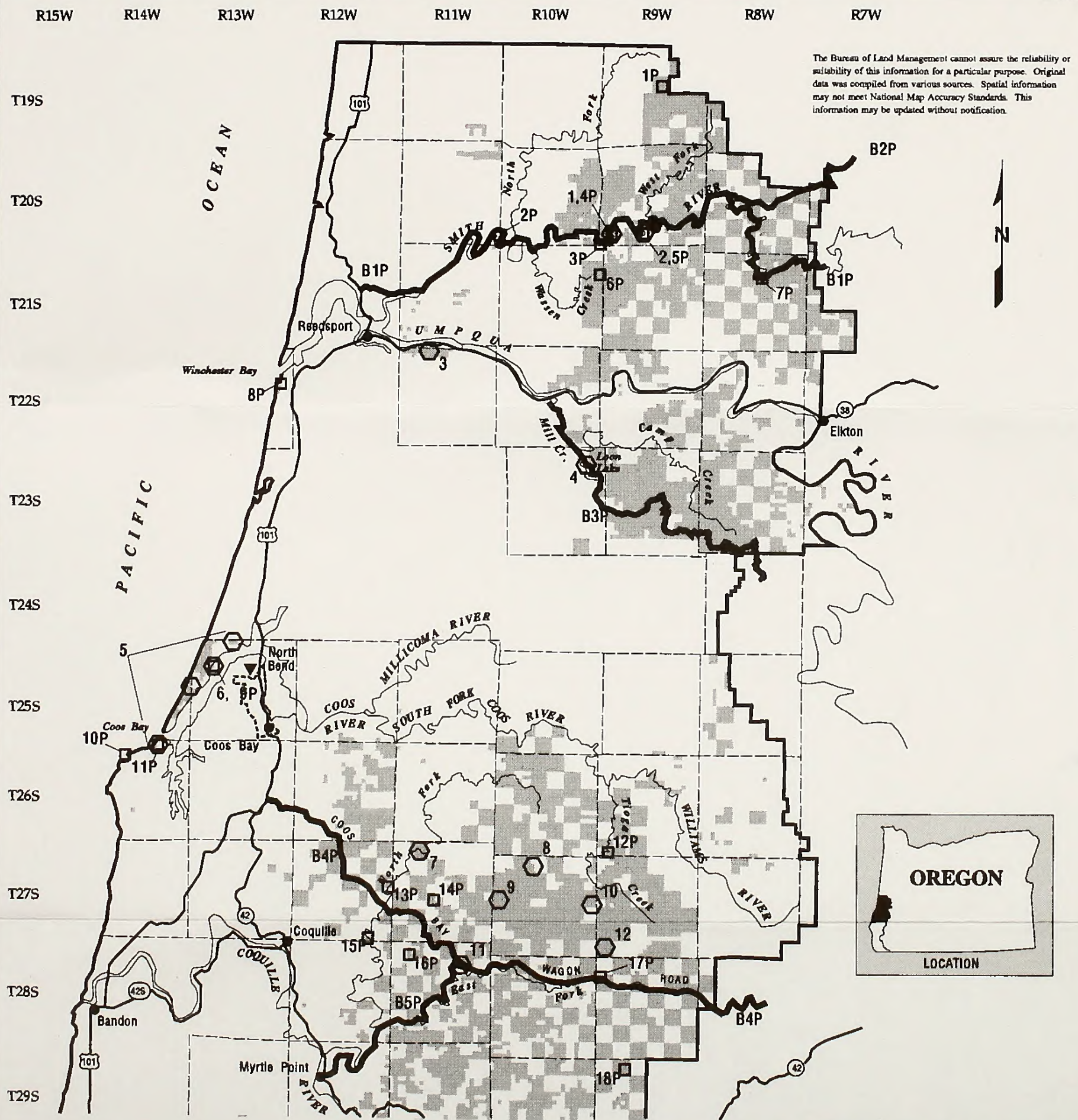
B3P = Mill Creek / Loon Lake / Tyee Roads

B4P = Coos Bay Wagon Road

B5P = Myrtle Point to Sitkum Road

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



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MAP 7N: EXISTING AND PROPOSED RECREATION SITES, AREAS, TRAILS, AND BYWAYS

COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP



# LEGEND

- Planning Area Boundary
- District Boundary
- Highway

- Stream
- City, Urban Area
- BLM Administered Land

- Existing Recreation Site/Area
- Proposed Recreation Site/Area
- Proposed Scenic Byway

- 11 = Frona Park
- 13 = New River SRMA
- 14 = Bear Creek
- 15 = Sixes River SRMA
- 16 = Palmer Butte

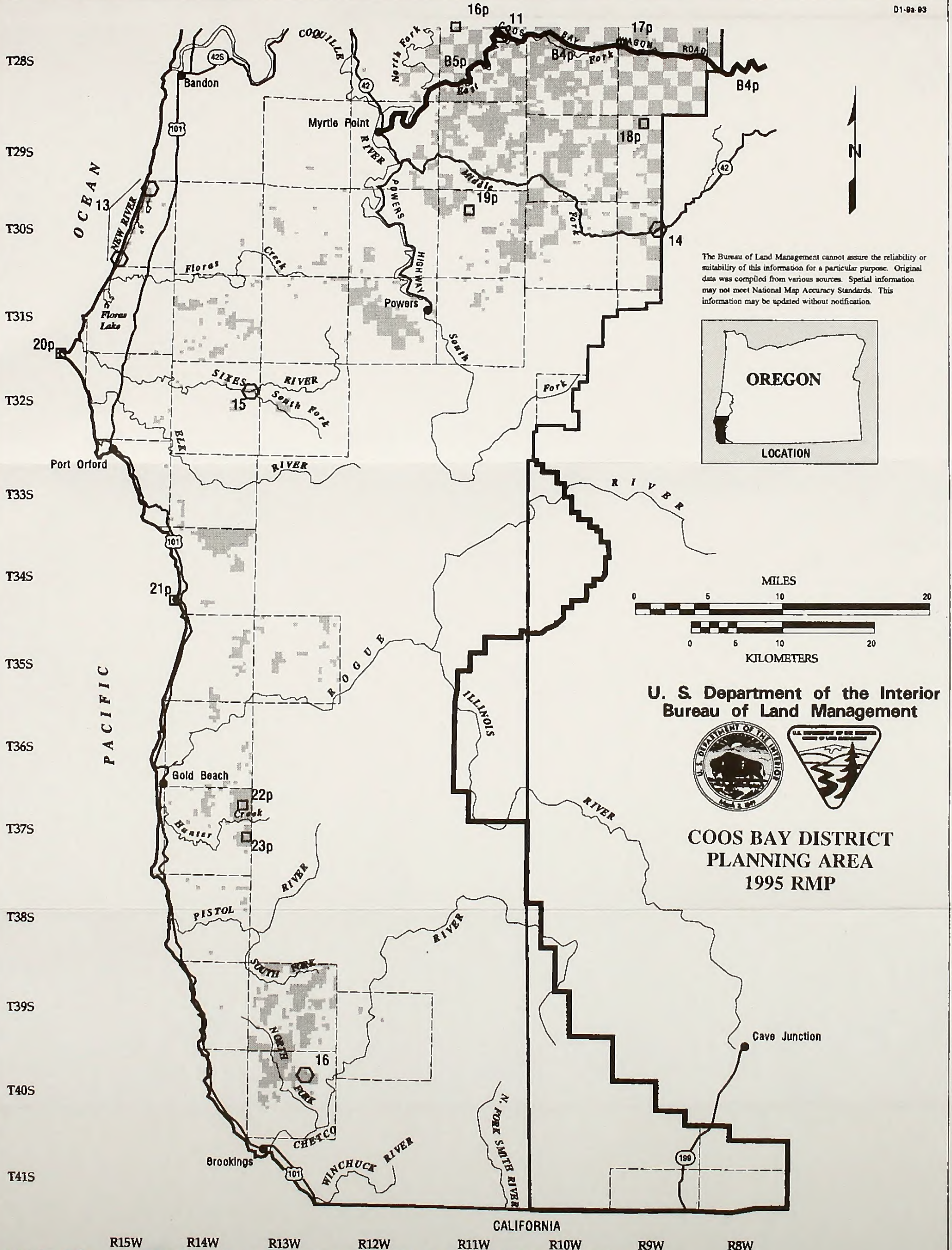
- 18p = Upper Rock Creek Trail
- 19p = Camp Myrtlewood Trail
- 20p = Cape Blanco
- 21p = South Sister Rock
- 22p = North Fork Hunter Creek Trail
- 23p = Hunter Creek Bog Trail

- B4p = Coos Bay Wagon Road
- B5p = Myrtle Point to Sitkum

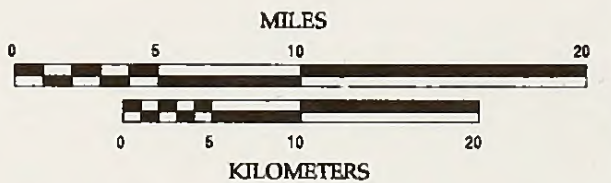
- 16p = Middle Creek Park
- 17p = Judge Hamilton Park

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



The Bureau of Land Management cannot assure the reliability or suitability of this information for a particular purpose. Original data was compiled from various sources. Special information may not meet National Map Accuracy Standards. This information may be updated without notification.



U. S. Department of the Interior  
Bureau of Land Management



COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 7S: EXISTING AND PROPOSED RECREATION SITES, AREAS, TRAILS, AND BYWAYS

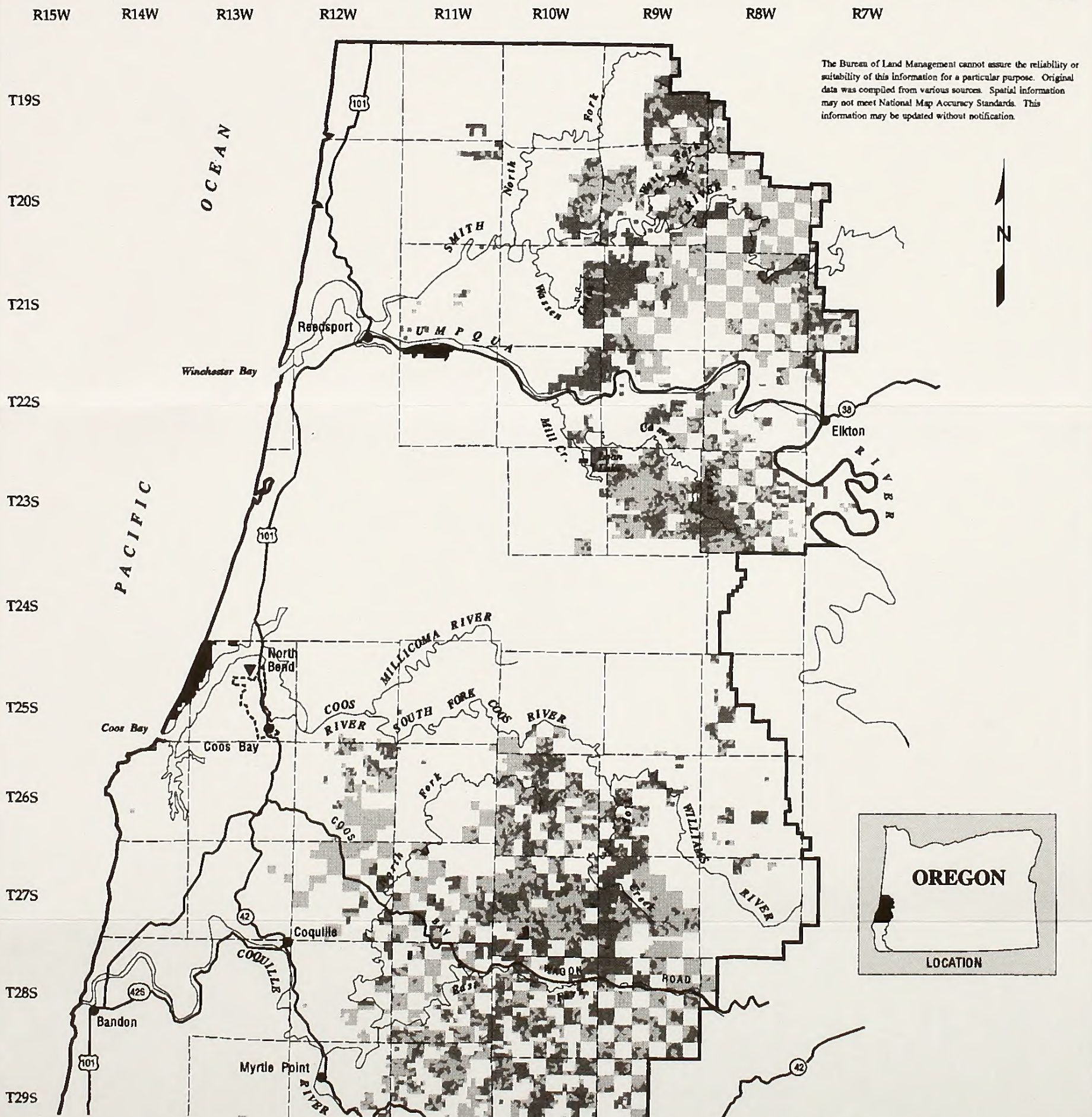


# LEGEND

- |                          |                         |                     |
|--------------------------|-------------------------|---------------------|
| ▼ District Office        | Stream                  | ■ Closed            |
| — Planning Area Boundary | ● City, Urban Area      | ■ Open / Restricted |
| — Highway                | ■ BLM Administered Land |                     |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-92-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

MAP 8N: LOCATABLE MINERALS RESTRICTIONS

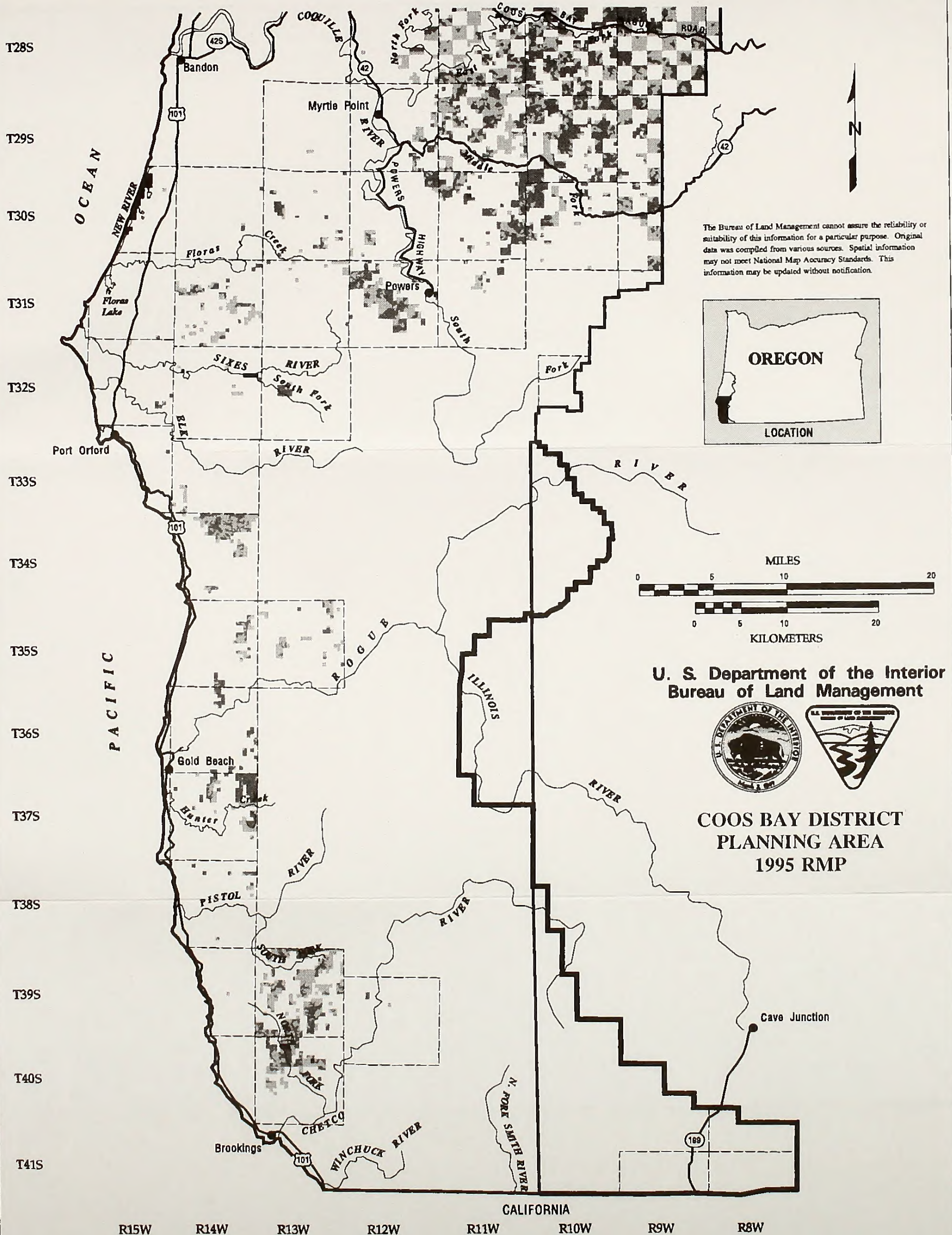


# LEGEND

- |                                                                                                          |                                                                                                         |                                                                                                       |
|----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
|  Planning Area Boundary |  Stream                |  Closed            |
|  District Boundary      |  City, Urban Area      |  Open / Restricted |
|  Highway                |  BLM Administered Land |                                                                                                       |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

D1-9a-93



MAP 8S: LOCATABLE MINERALS RESTRICTIONS

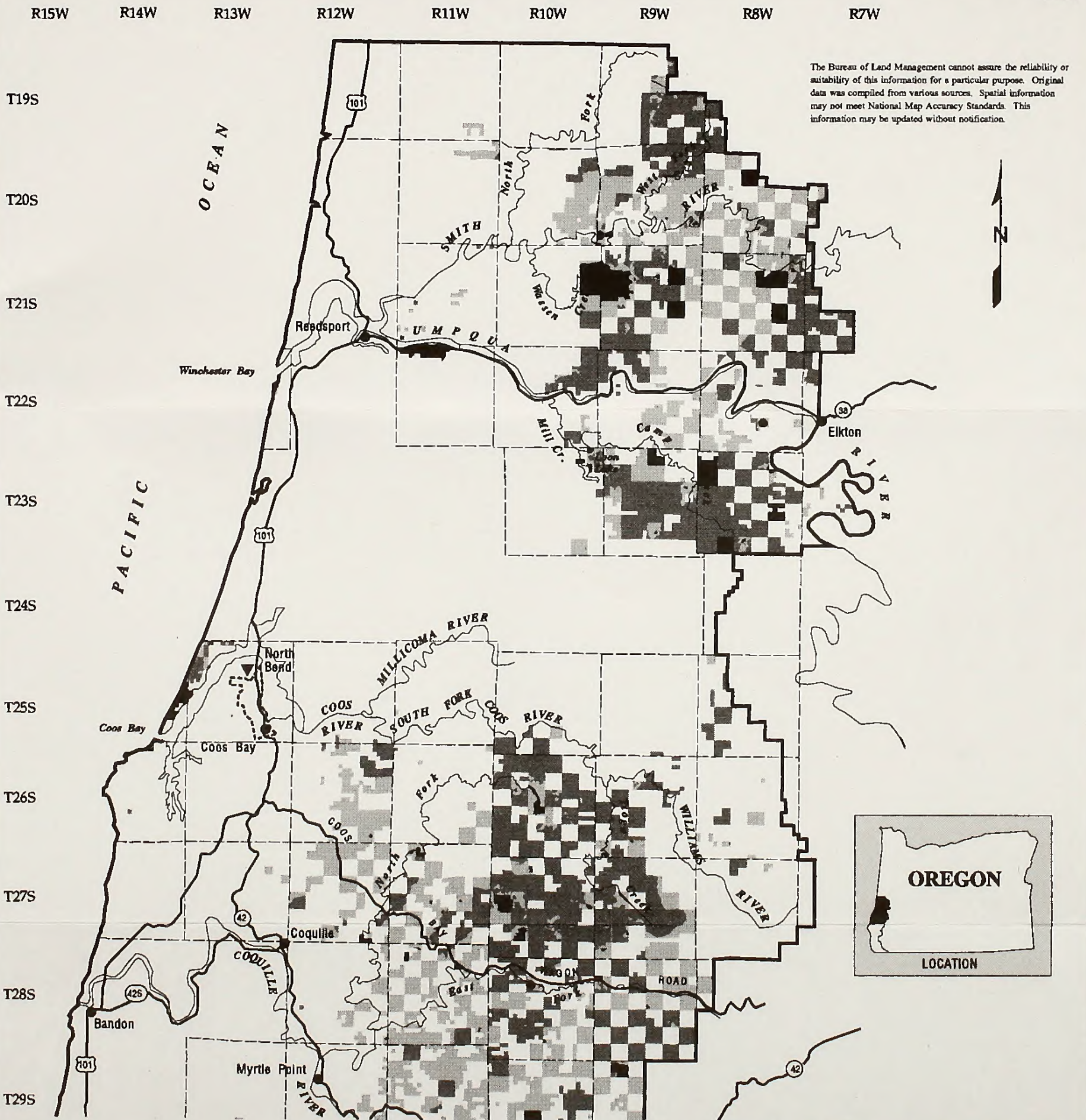


# LEGEND

- |                          |                         |       |
|--------------------------|-------------------------|-------|
| ▼ District Office        | — Stream                | ■ CSU |
| — Planning Area Boundary | • City, Urban Area      | ■ NSO |
| — Highway                | ■ BLM Administered Land |       |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-9a-03



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP



LEGEND

- Planning Area Boundary

District Boundary

Highway

Stream

City, Urban Area

BLM Administered Land

Closed

Open / Restricted
- Note: Does not reflect some recent corrections and changes which are included on the Land Status map.
- 01-8a-83
- The Bureau of Land Management cannot assure the reliability or suitability of this information for a particular purpose. Original data was compiled from various sources. Spatial information may not meet National Map Accuracy Standards. This information may be updated without notification.

OREGON  
LOCATION

MILES  
0 5 10 20  
KILOMETERS  
0 5 10 20

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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

Cave Junction

CALIFORNIA

R15W R14W R13W R12W R11W R10W R9W R8W

T28S  
T29S  
T30S  
T31S  
T32S  
T33S  
T34S  
T35S  
T36S  
T37S  
T38S  
T39S  
T40S  
T41S
- MAP 8S: LOCATABLE MINERALS RESTRICTIONS

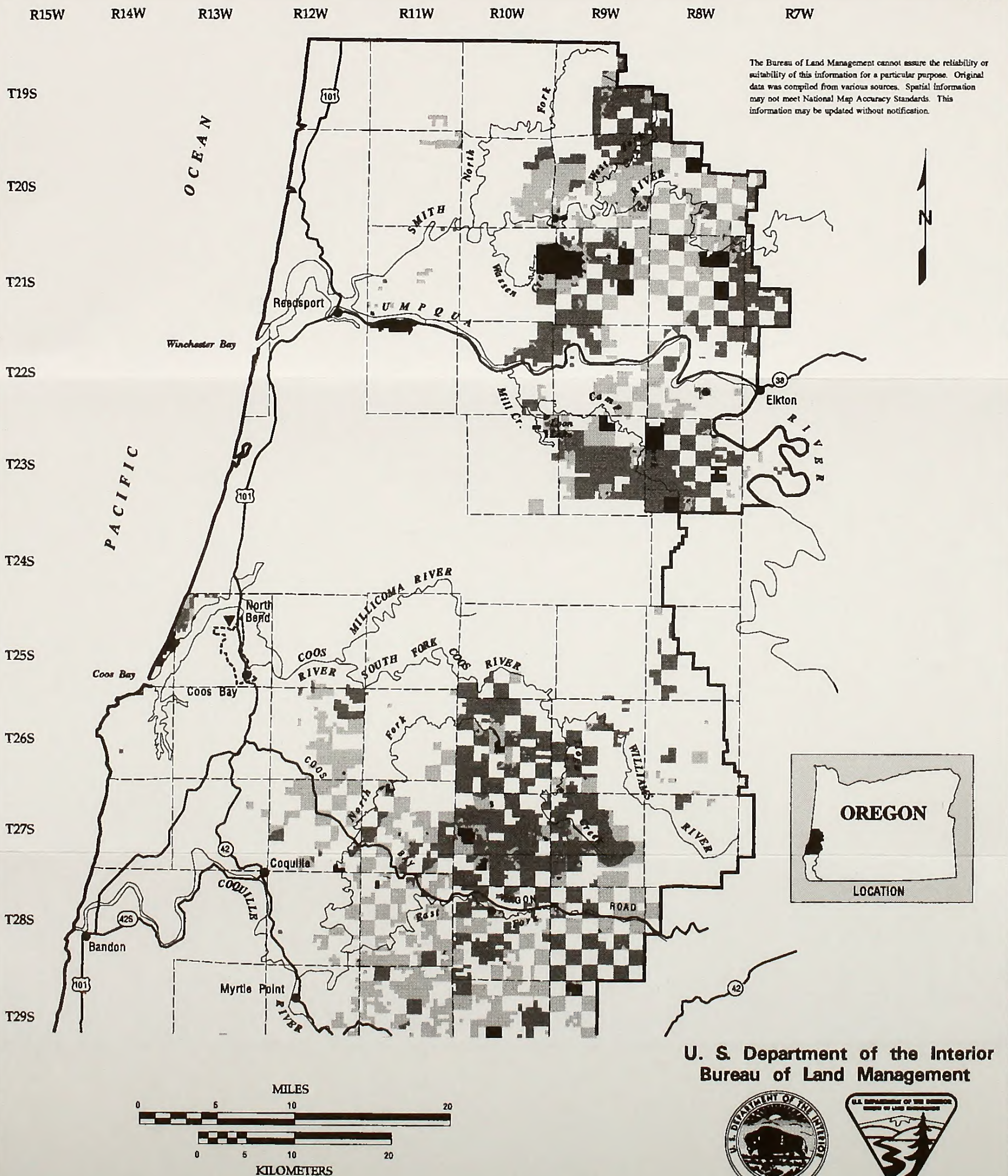


# LEGEND

- |                          |                         |       |
|--------------------------|-------------------------|-------|
| ▼ District Office        | Stream                  | ■ CSU |
| — Planning Area Boundary | ● City, Urban Area      | ■ NSO |
| — Highway                | ■ BLM Administered Land |       |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-92-93



MAP 9N: LEASABLE MINERALS RESTRICTIONS

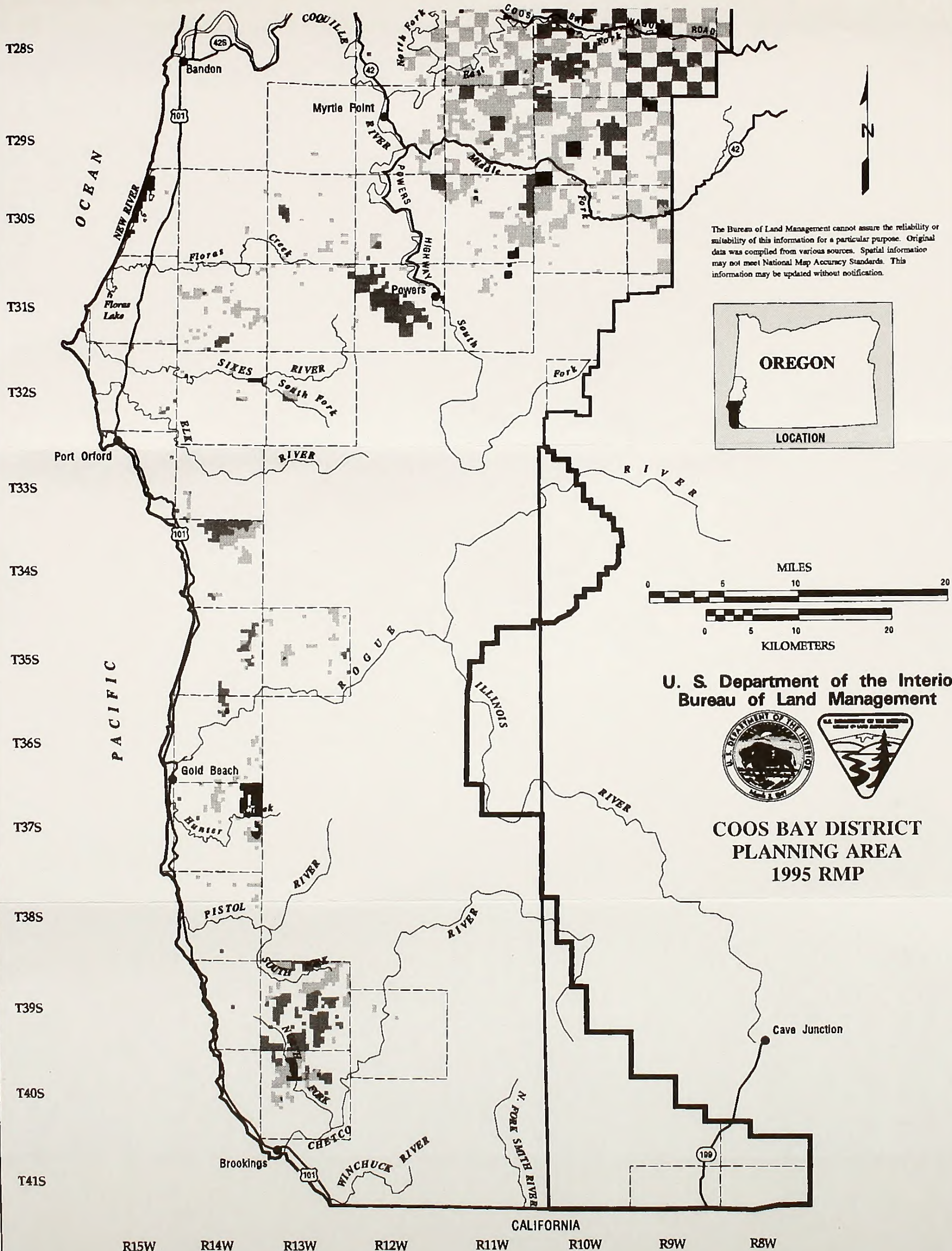


# LEGEND

- |  |                        |  |                       |  |     |
|--|------------------------|--|-----------------------|--|-----|
|  | Planning Area Boundary |  | Stream                |  | CSU |
|  | District Boundary      |  | City, Urban Area      |  | NSO |
|  | Highway                |  | BLM Administered Land |  |     |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-92-93



MAP 9S: LEASABLE MINERALS RESTRICTIONS

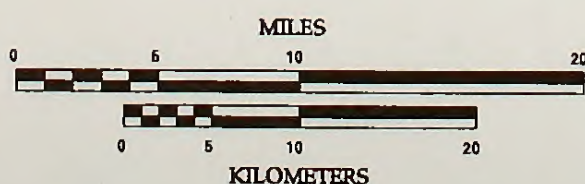
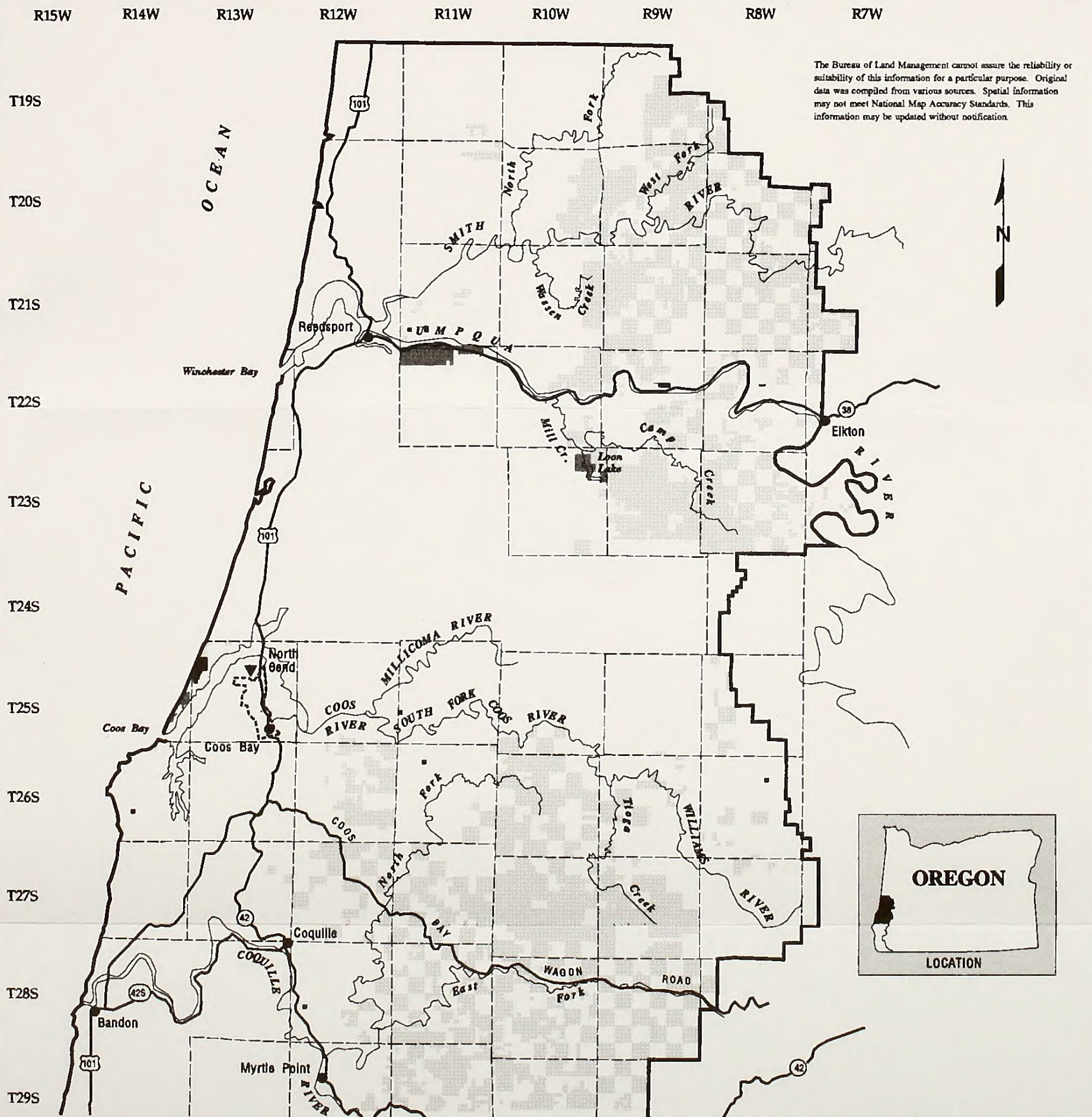


# LEGEND

- |                          |                    |               |
|--------------------------|--------------------|---------------|
| ▼ District Office        | Stream             | ■ Zone 1 Land |
| — Planning Area Boundary | ● City, Urban Area | ▨ Zone 2 Land |
| — Highway                |                    | ■ Zone 3 Land |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

01-9a-93



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COOS BAY DISTRICT  
PLANNING AREA  
1995 RMP

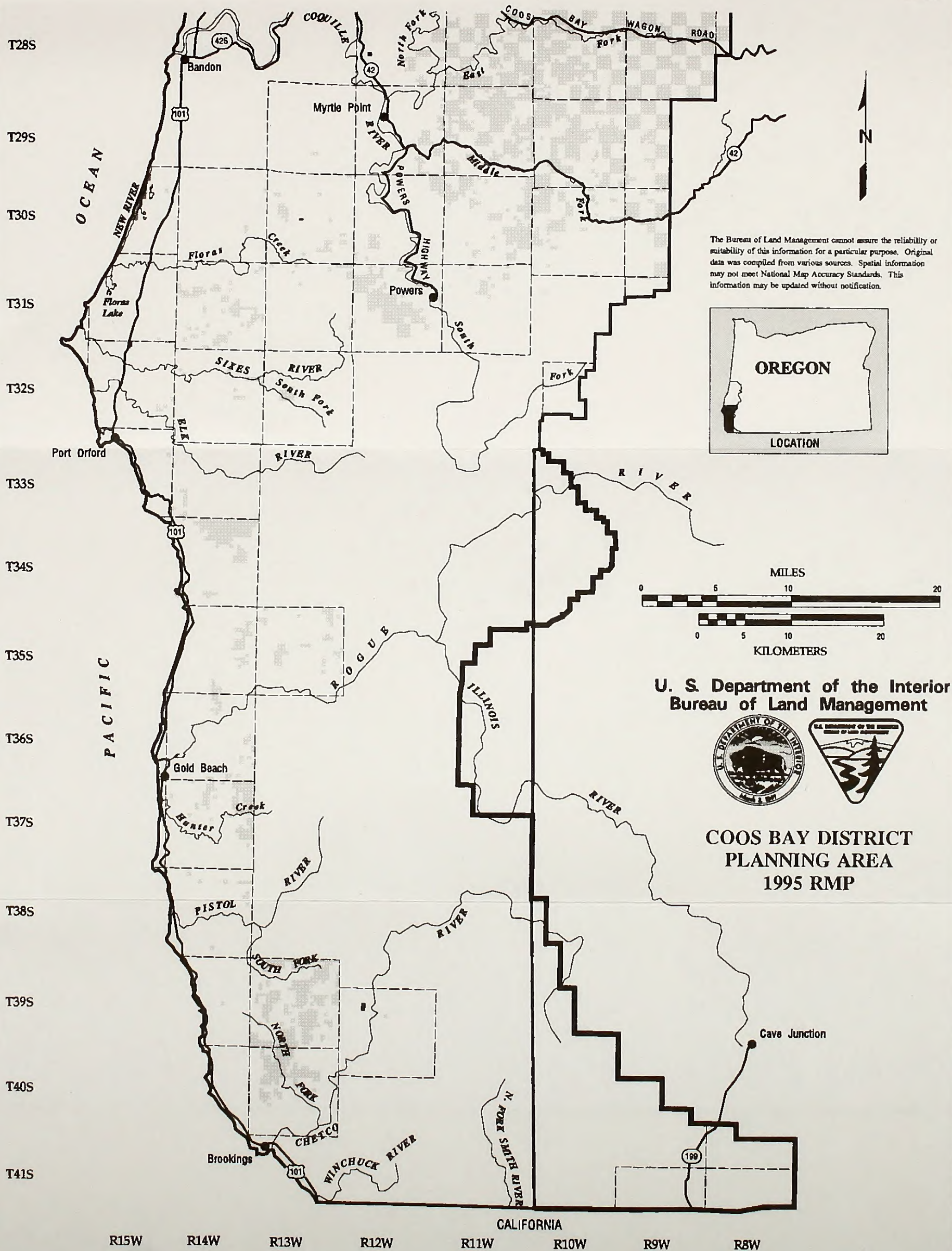


# LEGEND

- |                                                                                                          |                                                                                                    |                                                                                                 |
|----------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
|  Planning Area Boundary |  Stream           |  Zone 1 Land |
|  District Boundary      |  City, Urban Area |  Zone 2 Land |
|  Highway                |                                                                                                    |  Zone 3 Land |

Note: Does not reflect some recent corrections and changes which are included on the Land Status map.

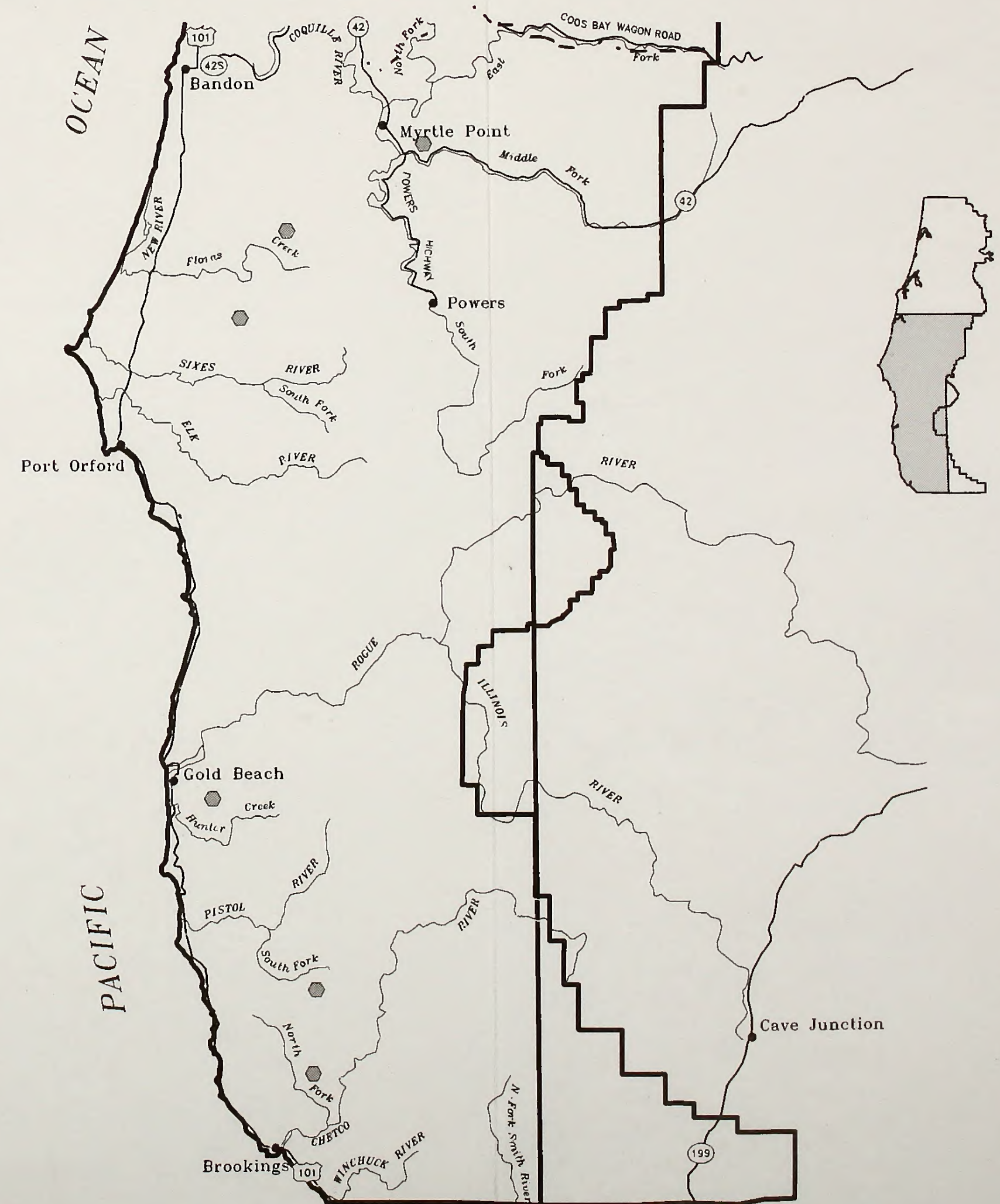
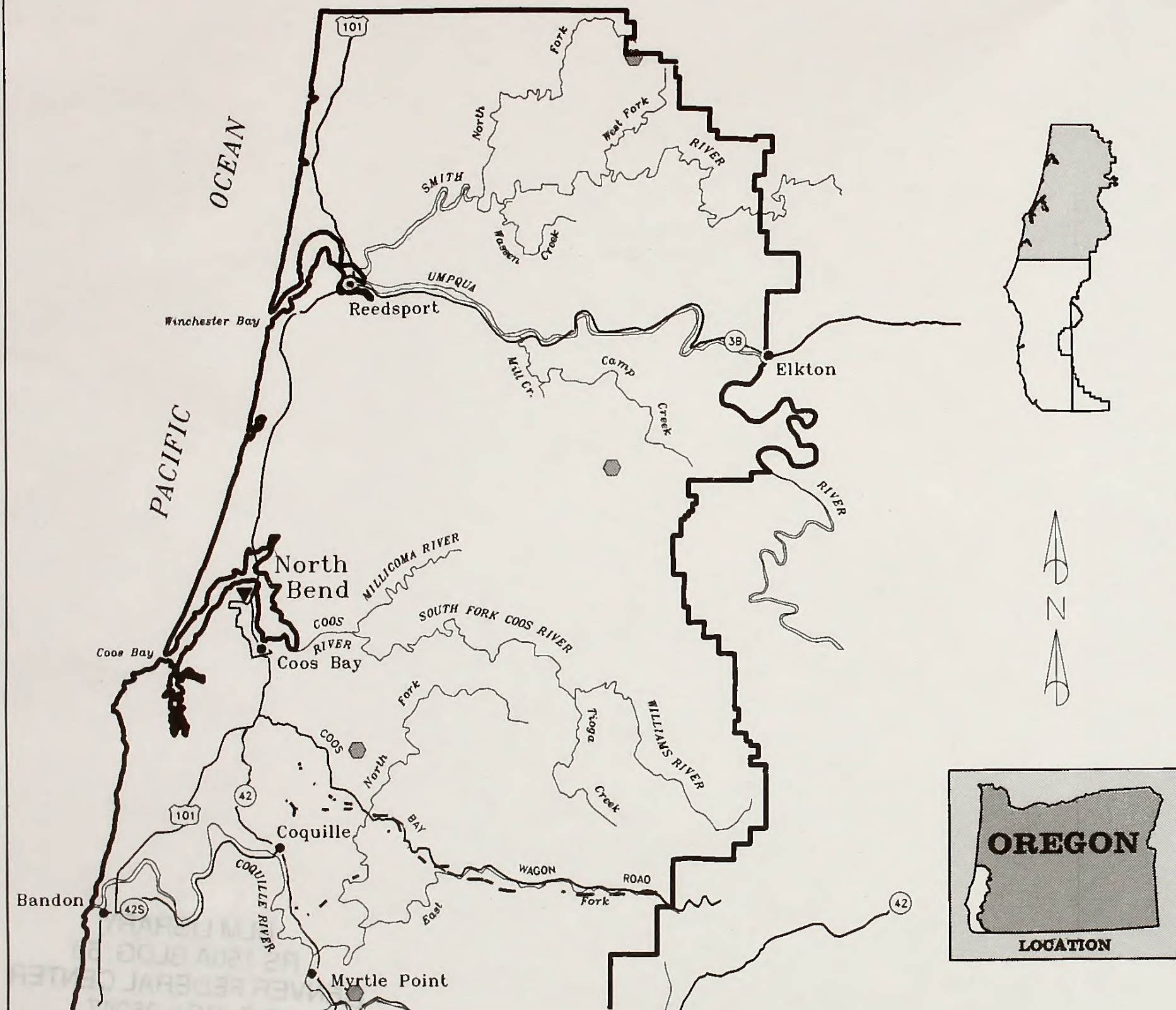
01-9a-93



MAP 10S: LAND TENURE ZONES



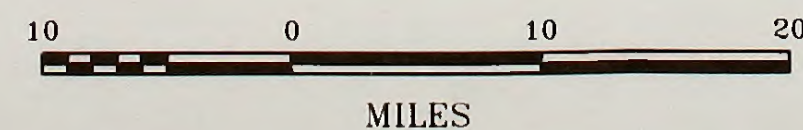
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# LEGEND

- ▼ District Office
- 5 Interstate Highway
- 199 U.S. Highway
- 46 State Highway
- Planning Area Boundary
- Highway
- Stream
- Urban Area
- City
- General Communication Site
- Utility Right of Way

## U.S. Department of the Interior Bureau of Land Management COOS BAY DISTRICT PLANNING AREA 1995 RMP



MAP 11: COMMUNICATION SITES AND RIGHTS OF WAY



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BUREAU OF LAND MANAGEMENT  
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6 1995

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Coos Bay

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resource

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U. S. Bureau of Land  
Management. Coos Bay  
Coos Bay District record of  
decision and resource

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DENVER, CO 80225



**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
COOS BAY DISTRICT OFFICE**

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North Bend, Oregon 97459

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PENALTY FOR PRIVATE USE, \$300

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Bureau of Land Management  
Permit No. G-76